CHAPIN

THE

Horticulturist,

and

JOURNAL OF RURAL ART AND RURAL TASTE.

The Home Education of the Rural Districts.

WHILE the great question of Agricultural Schools is continually urged upon our legislatures, and, as yet, continually put off with fair words, let us see if there is not room for great improvement in another way—for the accomplishment of which the farming community need ask no assistance.

Our thoughts are turned to the subject of *home education.* It is, perhaps, the peculiar misfortune of the United States, that the idea of education is always affixed to something *away* from home. The boarding-school, the academy, the college—it is there alone we suppose it possible to educate the young man or the young woman. *Home* is only a place to eat, drink, and sleep. The parents, for the most part, gladly shuffle off the whole duties and responsibilities of training the heart, and the social nature of their children—believing that if the intellect is properly developed in the schools, the whole man is educated. Hence the miserably one-sided and incomplete character of so many even of our most able and talented men—their heads have been educated, but their social nature almost utterly neglected. Awkward manners and a rude address, are not the only evidences that many a clever lawyer, professional man, or merchant, offers to us continually, that his education has been wholly picked up away from home, or that home was never raised to a level calculated to give instruction. A want of taste for all the more genial and kindly topics of conversation, and a want of relish for refined and innocent social pleasures, mark such a man as an ill-balanced or one-sided man in his inner growth and culture. Such a man is often successful at the bar or in trade, but he is uneasy and out of his element in the social circle, because he misunderstands it and despises it. His only idea of society is display, and he loses more than three-fourths of the delights of life by never having been educated to use his best social qualities—the qualities which teach a man how to love his neighbor as himself, and to throw the sunshine of a cultivated understanding and heart upon the little trifling events and enjoyments of every day life.

If this is true of what may be called the wealthier classes of the community, it is, we are sorry to say, still more true of the agricultural class. The agricultural class is continually complimented by the press and public debaters,—nay, it even compliments itself, with being the "bone and sinew of the country"—the "substantial yeomanry" —the followers of the most natural and "noblest occupation," &c. &c. But the truth is, that in a country like this, knowledge is not only power; it is also influence and position; and the farmers, as a class, are the least educated, and therefore the least powerful, the least influential, the least respected class in the community.

This state of things is all wrong, and we deplore it—but the way to mend it is not by feeding farmers with compliments, but with plain truths. As a natural consequence of belonging to the least powerful and least influential class, the sons and daughters of farmers—we mean the *smartest* sons and daughters—those who might raise up and elevate the condition of the whole class, if they would recognize the dignity and value of their calling, and put their talents into it—are no sooner able to look around and choose for themselves, than they bid good bye to farming. It is too *slow* for the boys, and not *genteel* enough for the girls.

All the education of the schools they go to, has nothing to do with making a farmer of a talented boy, or a farmer's wife of a bright and clever girl—but a great deal to do with unmaking them, by pointing out the superior advantages of merchandise, and the "honorable" professions. At home, it is the same thing. The farmer's son and daughter find less of the agreeable and attractive, and more of the hard and sordid at their fire-side, than in the houses of any other class of equal means. This helps to decide them to leave "dull care" to dull spirits, and choose some field of life which has more attractions, as well as more risks, than their own.

We have stated all this frankly, because we believe it to be a false and bad state of things which cannot last. The farming class of America is not a rich class—but neither is it a poor one—while it is an independent class. It may and should wield the largest influence in the state, and it might and should enjoy the most happiness—the happiness belonging to intelligent minds, peaceful homes, a natural and independent position, and high social and moral virtues. We have said much, already, of the special schools which the farmer should have to teach him agriculture as a practical art, so that he might make it compare in profit, and in the daily application of knowledge which it demands, with any other pursuit. But we have said little or nothing of the farmer's *home education* and social influences—though these perhaps lie at the very root of the whole matter.

We are not ignorant of the powerful influence of *woman*, in any question touching the improvement of our social and home education. In fact it is she who holds all the power in this sphere; it is she, who really but silently, directs, controls, leads and governs the whole social machine—whether among farmers or others, in this country. To the women of the rural districts—the more intelligent and sensible of the farmer's wives and daughters, we appeal then, for a better understanding and a more correct appreciation of their true position. If they will but study to raise the character of the farmer's social life, the whole matter is accomplished. But this must be done truthfully

and earnestly, and with a profound faith in the true nobility and dignity of the farmer's calling. It must not be done by taking for social growth the finery and gloss of mere city customs and observances. It is an improvement that can never come from the atmosphere of boarding schools and colleges as they are now constituted, for boarding schools and colleges pity the farmer's ignorance, and despise him for it. It must, on the contrary, come from an intelligent conviction of the honesty and dignity of rural life; a conviction that as agriculture embraces the sphere of God's most natural and beautiful operations, it is the best calculated, when rightly understood, to elevate and engage man's faculties; that, as it feeds and sustains the nation, it is the basis of all material wealth; and as it supports all other professions and callings, it is intrinsically the parent and superior of them all. Let the American farmer's wife never cease to teach her sons, that though other callings may be more lucrative, yet there is none so true and so safe as that of the farmer,—let her teach her daughters that, fascinating and brilliant as many other positions appear outwardly, there is none with so much intrinsic satisfaction as the life of a really intelligent proprietor of the soil, and above all, let her show by the spirit of intelligence, order, neatness, taste, and that *beauty of propriety*, which is the highest beauty *in her home*, that she really knows, understands, and enjoys, her position as a wife and mother of a farmer's family—let us have but a few earnest apostles of this kind, and the condition and prosperity of the agricultural class, intellectually and socially, will brighten, as the day brightens after the first few bars of golden light tinge the eastern horizon.

We are glad to see and record such signs of daybreak—in the shape of a recognition of the low social state which we deplore, and a cry for reform—which now and then make themselves heard, here and there, in the country. MAJOR PATRICK—a gentleman whom we have not the pleasure of knowing, though we most cordially shake hands with him mentally, has delivered an address before the Jefferson county Agricultural Society, in the state of New-York, in which he has touched with no ordinary skill, upon this very topic. The two pictures which follow are as faithful as those of a Dutch master, and we hang them up here, conspicuously, in our columns, as being more worthy of study by our farmer's families, than any pictures that the ART UNION will distribute this year, among all those that will be scattered from Maine to Missouri.

"An industrious pair, some twenty or thirty years ago, commenced the world with strong hands, stout hearts, robust health, and steady habits. By the blessing of Heaven their industry has been rewarded with plenty, and their labors have been crowned with success. The dense forest has given place to stately orchards of fruits, and fertile fields, and waving meadows, and verdant pastures, covered with evidences of worldly prosperity. The log cabin is gone, and in its stead a fair white house, two stories, and a wing with kitchen in the rear, flanked by barns, and cribs, and granaries, and dairy houses.

But take a nearer view. Ha! what means this mighty crop of unmown thistles bordering the road. For what market is that still mightier crop of pigweed, dock and nettles destined, that fills up the space *they call* the "garden?" And look at those wide, unsightly thickets of elm, and sumac, and briers, and choke-cherry, that mark the lines of every fence!

Approach the house, built in the road to be *convenient*, and save land! Two stories and a wing, and every blind shut close as a miser's fist, without a tree, or shrub, or flower to break the air of barrenness and desolation around it. There it stands, white, glaring and ghastly as a pyramid of bones in the desert. Mount the unfrequented door stone, grown over with vile weeds, and knock till your knuckles are sore. It is a beautiful moonlight October evening; and as you stand upon that stone, a ringing laugh comes from the *rear*, and satisfies you that somebody lives *there*. Pass now around to the rear: but hold your nose when you come within range of the piggery, and have a care that you don't get swamped in the neighborhood of the sink spout. Enter the kitchen. Ha! here they are all alive, and here they *live* all together. The kitchen is the kitchen, the dining-room, the sitting-room, the room of all work. Here father sits with his hat on and in his shirt sleeves. Around him are his boys and hired men, some with hats and some with coats, and some with neither. The boys are busy shelling corn for samp; the hired men are scraping whip stocks and whittling bow pins, throwing every now and then a sheep's eye and a jest at the girls, who, with their mother, are *doing-up* the house-work. The younger fry are building cob-houses, parching corn, and burning their fingers. Not a book is to be seen, though the winter school has commenced, and the master is going to board there. Privacy is a word of unknown meaning in that family; and if a son or daughter should borrow a book, it would be almost impossible to read it in that room; and on no occasion is the front house opened, except when "company come to spend the afternoon," or when things are brushed and dusted, and "set to rights."

Yet these are as honest, as worthy and kind-hearted people as you will find anywhere, and are *studying out* some way of getting their younger children into a better position than they themselves occupy. They are in easy circumstances, owe nothing, and have money loaned on bond and mortgage. After much consultation, a son is placed at school that he may be fitted to go into a store, or possibly an office, to study a *profession;* and a daughter is sent away to learn books, and manners, and *gentility*. On this son or daughter, or both, the hard earnings of years are lavished; and they are reared up in the belief that whatever smacks of the country, is vulgar—that the farmer is *necessarily* ill bred, and his calling ignoble.

Now, will any one say that this picture is overdrawn? I think not. But let us see if there is not a ready way to change the whole expression and character of the picture, almost without cost or trouble. I would point out an easier, happier, and more economical way of educating those children, far more thoroughly, while at the same time the minds of the parents are expanded, and they are prepared to enjoy, in the society of their educated children, the fruits of their own early industry.

And first: let the *front* part of that house be thrown open, and the most convenient, agreeable, and pleasant room in it, be selected as the *family room*. Let its doors be ever open, and when the work of the kitchen is completed, let mothers and daughters be found *there*, with their appropriate work. Let it be the room where the family altar is erected, on which the father offers the morning and the evening sacrifice. Let it be consecrated to Neatness, and Purity, and Truth. Let no *hat* ever be seen in that room on the head of its owner, [unless he be a Quaker friend;] let no *coatless* individual be permitted to enter it. If father's head is bald, (and some there are in that predicament,) his daughter will be proud to see his temples covered by the neat and graceful silken cap that her own hands have fashioned for him. If the coat he wears by day is too heavy for the evening, calicoes are cheap, and so is cotton wadding. A few shillings placed in that daughter's hand, ensures him the most comfortable wrapper in the world; and if his boots are hard, and the

nails cut mother's carpet, a bushel of wheat once in three years, will keep him in slippers of the easiest kind. Let the table which has always stood under the looking glass, *against the wall*, be wheeled into the room, and plenty of useful (not ornamental) books and periodicals be laid upon it. When evening comes, bring on the lights—and plenty of them—for sons and daughters—all who can—will be most willing students. They will read, they will learn, they will discuss the subjects of their studies with each other; and parents will often be quite as much instructed as their children. The well conducted agricultural journals of our day throw a flood of light upon the *science* and *practice* of agriculture; while such a work as Downing's Landscape Gardening, [or the *Horticulturist*,] laid one year upon that centre table, will show its effects to every passer-by, for with books and studies like these, a purer taste is born, and grows most vigorously.

Pass along that road after five years working of this system in the family, and what a change! The thistles by the roadside enriched the manure heap for a year or two, and then they died. These beautiful maples and those graceful elms, that beautify the grounds around that renovated home, were grubbed from the wide hedge-rows of five years ago; and so were those prolific rows of blackberries and raspberries, and bush cranberries that show so richly in that *neat garden*, yielding abundance of small fruit in their season. The unsightly out-houses are screened from observation by dense masses of foliage; and the many climbing plants that now hang in graceful festoons from tree, and porch, and column, once clambered along that same *hedge row*. From the meadow, from the wood, and from the gurgling stream, many a native wild flower has been transplanted to a genial soil, beneath the homestead's sheltering wing, and yields a daily offering to the household gods, by the hands of those fair priestesses who have now become their ministers. By the planting of a few trees, and shrubs, and flowers, and climbing plants, around that once bare and uninviting house, it has become a tasteful residence, and its money value is more than doubled. A cultivated taste displays itself in a thousand forms, and at every touch of its hand gives beauty and value to property. A judicious taste, so far from plunging its possessor into expense, makes money for him. The *land* on which that *hedge row* grew five years ago, for instance, has produced enough since to *doubly pay* the expense of grubbing it, and of transferring its fruit briers to the garden, where they have not only supplied the family with berries in their season, but have yielded many a surplus quart, to purchase that long row of red and yellow Antwerps, and English gooseberries; to say nothing of the scions bought with their money, to form new heads for the trees in the old orchard.

These sons and daughters sigh no more for city life, but love with intense affection every foot of ground they tread upon, every tree, and every vine, and every shrub their hands have planted, or their taste has trained. But stronger still do their affections cling to that *family room*, where their minds first began to be developed, and to that center-table around which they still gather with the shades of evening, to drink in knowledge, and wisdom, and understanding.

The stout farmer, who once looked upon his acres only as a laboratory for transmitting labor into gold, now takes a widely different view of his possessions. His eyes are opened to the *beautiful* in nature, and he looks with reverence upon every giant remnant of the forest, that by good luck escaped his murderous axe in former days. No leafy monarch is now laid low without a stern necessity demands it; but many a vigorous tree is planted in the hope that the children of *his* children may gather beneath the spreading branches, and talk with pious gratitude of him who planted them. No longer feeling the need of taxing his physical powers to the utmost, his eye takes the place of his hand, when the

latter grows weary, and *mind* directs the operations of labor. See him stand and look with delighted admiration at his sons, *his educated sons*, as they take hold of every kind of work, and roll it off with easy motion, but with the power of mind in every stroke.

But it is the proud mother who takes the solid comfort, and wonders that it is so easy after all, *when one knows how*, to live at ease, enjoy the society of happy daughters and contented sons, to whom the *city folks* make most respectful bows, and treat with special deference as truly *well-bred ladies and gentlemen*.

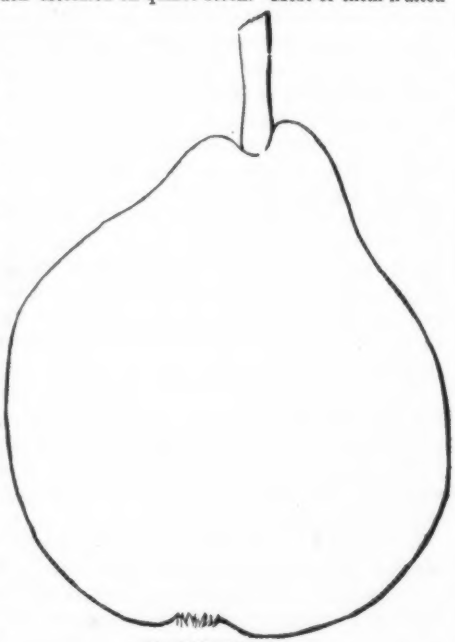
Now, this is no more a fancy picture than the other. It is a process that I have watched in many families, and in different states. The results are everywhere alike, because they are natural. The same causes will always produce the same effects, varying circumstances only modifying the intensity."

A NOTE ON THE TRUE SOLDAT LABOUREUR PEAR.

BY F. L. OLMSTED, SOUTHSIDE, STATEN ISLAND, N. Y.

My Dear Sir: Two and three years since, I planted one thousand pear trees, embracing most of the varieties that are much esteemed on quince stock. Most of them fruited last year, but a few varieties not till this. Among the latter is one which I have never seen described in any American publication, and which has given me more satisfaction than any other.

I received a dozen trees from Messrs. Parsons & Co., which they had received from France with the label *Soldat Laboureur*, but believed to be identical with the *Beurre d'Aremburgh;* the fruit, however, proves to be quite different from that well known sort, as well as from *Glout Morceau*, or anything else that I know. The trees have made a strong, healthy, upright, and naturally regular and pyramidal growth, out-stripping everything else that I have, except possibly, *Beurre d'Amalis;* the shoots of this season, on all parts of the tree, being in every case, on an average, three feet in length. The fruit answers to the following description, which I have to-day received from your French correspondent, M. Desportes, as that of the true *Soldat Laboureur*, which is by no means, he says, to be confounded with the *Orpheline d'Eugheim*, (*Beurre d'Aremburgh* as known here,) though it long has been.



True Soldat Laboureur

True Soldat Laboureur.—Color, yellow, but covered with grey and russet spots and dots, a little greener about the stem. Texture—skin fine; flesh coarse, white, melting; water abundant; sweet, vinous and perfumed; ripens end of October. It is a very good, first (class) pear. The fruit is generally larger than the above outline. The branches are upright, and it is a vigorous grower.

I have only to express my great regret that the specimens I had intended to send you have been accidentally injured, so much so that they would be of no service in enabling you to judge of its value. I allowed one of my trees to bear a dozen fine fruit, with which burthen its growth was quite as strong as any of the others, so I have no doubt it will prove an early and productive bearer.

The Bartlett is doing remarkably well on quince stocks with me—very productive, and the fruit of fine flavor. Soil, deep clayey loam. Yours respectfully,

Fred. Law Olmsted.

South Side, Staten Island, Nov. 24, 1851.

We should be glad to be informed if any other of our fruit-growing readers have proved this fine variety. Ed.

THE COLOR OF BUILDINGS IN RURAL SCENERY.

BY JAS. FENNIMORE COOPER.

[All our readers know our doctrine regarding the fancy of our countrymen for *white* paint. We are glad to find the subject so well touched upon in the right spirit, by the late Mr. Cooper, in the following extract from an article by him on our Scenery contrasted with that of Europe, in Putnam's Home Book of the Picturesque. Ed.]

It has been a question among the admirers of natural scenery, whether the presence or absence of detached farm-houses, of trees, of hedges, walls and fences, most contribute to the effect of any inland view. As these are the great points of distinction between the continent of Europe and our own country, we shall pause a moment to examine the subject a little more in detail. When the towns and villages are sufficiently numerous to catch the attention of the eye, and there are occasional fragments of forest in sight, one does not so much miss the absence of that appearance of comfort and animated beauty that the other style of embellishment so eminently possesses. A great deal, however, depends, as respects these particulars, on the nature of the architecture, and the *color* of the buildings and fences. It is only in very particular places, and under very dull lights, that the contrast between white and green is agreeable. *A fence that looks as if it were covered with clothes hung up to dry*, does very little towards aiding the picturesque. And he who endeavors to improve his taste in these particulars, will not fail to discern in time that a range of country which gives up its objects, chiselled and distinct, but sober and sometimes sombre, will eventually take stronger hold of his fancy, than one that is glittering with the fruits of the paint and white-wash brushes. We are never dissatisfied with the natural tints of stone, for the mind readily submits to the ordering of nature; and, though one color may be preferred to another, each and all are acceptable in their proper places. Thus, a marble structure is expected to be white, and as such, if the buildings be of suitable dimensions and proportions, escapes our criticism on account of its richness and uses. The same may be said of other hues, when not artificial; but we think that most admirers of nature, as they come to cultivate their tastes, settle down into a pre-

ference for the gray and subdued, over all the bright tints that art can produce. In this particular, then, we give the preference to the effects of European scenery, over that of this country, where wood is so much used for the purposes of building, and where the fashion has long been to color it with white. A better taste, however, or what we esteem as such, is beginning to prevail, and houses in towns and villages, are now, not unfrequently, even painted in subdued colors. We regard the effect as an improvement, though to our taste, no hue, in its artificial objects, so embellishes a landscape as the solemn color of the more sober and less meretricious looking stones. We believe that a structure of white, with green blinds, is almost peculiar to this country. In the most propitious situations, and under the happiest circumstances, the colors are unquestionably unsuited to architecture, which, like statuary, should have but one tint. If, however, it be deemed essential to the flaunting tastes of the mistress of some mansion, to cause the hues of the edifice in which she resides to be as gay as her *toilette*, we earnestly protest against the *bright* green that is occasionally introduced for such purposes. There is a graver tint of the same color, that entirely changes the expression of a dwelling. Place two of these houses in close proximity, and scarcely an intellectual being would pass them, without saying that the owner of the one was much superior to the owner of the other, in all that marks the civilized man. Put a third structure in the immediate vicinity of these two, that should have but one color on its surface, including its binds, and we think that nine persons in ten, except the very vulgar and uninstructed, would at once jump to the conclusion that the owner of this habitation was in tastes and refinement superior to both his neighbors. A great improvement, however, in rural, as well as town architecture, is now in the course of introduction throughout all the northern states. More attention is paid to the picturesque, than was formerly the case, and the effects are becoming as numerous as they are pleasing. We should particularise New-Haven, as one of those towns that has been thus embellished of late years, and there are other places, of nearly equal size, that might be mentioned as having the same claims to an improved taste. But to return to the great distinctive features between an ordinary American landscape, and a similar scene in Europe. Of the artificial accessories it is scarcely necessary to say any more. One does not expect to meet with a ruined castle or abbey, or even fortress, in America; nor, on the other hand, does the traveller look for the forests of America, or that abundance of wood which gives to nearly every farm a sufficiency for all the common wants of life, on the plains and heights of the old world. Wood there certainly is, and possibly enough to meet the ordinary wants of the different countries, but it is generally in the hands of the governments or the great proprietors, and takes the aspect of forests of greater or less size, that are well cared for, cleared and trimmed like the grounds of a park. Germany has, we think, in some respects, a strong resemblance to the views of America. It is not so much wanting in detached copses and smaller plantations of trees, as the countries farther south and east of it, while it has less of the naked aspect, in general, that is so remarkable in France. Detached buildings occur more frequently in Germany than in France especially, and we might add, also, in Spain. The reader will remember that it is a prevalent usage throughout Europe, with the exception of the British Islands, Holland, and here and there a province in other countries, for the rural population to dwell in villages. This practice gives to the German landscape, in particular, a species of resemblance to what is ordinarily termed park scenery, though it is necessarily wanting in much of that expression which characterises the embellishments that properly belong to the latter. With us, this resemblance is often even stronger, in consequence of the careless graces of nature, and the great affluence of detached woods; the distinguishing feature existing in

in the farm-house, fences, and out-buildings. Of a cloudy day, a distant view in America often bears this likeness to a park, in a very marked degree, for then the graces of the scene are visible to the eye, while the defects of the details are too remote to be detected.

THE CALIFORNIA GRAPE.

BY T. A. S., SYRACUSE, N. Y.

DEAR SIR:—I notice in the Horticulturist for the current month, a communication from R. G. PARDEE, Esq., on the California Grape, in which it is stated on the authority of Capt. H——, of the U. S. army, and lady, "as far as their observation extended, and certainly in the vicinity of San Diego, there is no such thing as a native or wild growing grape to be found." Possibly in the vicinity of San Diego there may not be; but to my certain knowledge—native or wild growing grapes abound on the forks of the American river, the fruit of which I have seen and eaten. I have also been informed by Mr. EGBERT JUDSON, of this city, who has spent a year or more in the mining districts, and others, that the wild grape is abundant on the Upper Sacramento and its tributaries—Feather river and its branches, the Yuba, Bear creek, &c.

The native grape resembles somewhat our native, the Fox, having berries, however, a little larger, of a shade darker color, and being less astringent, or *foxy*, and to us vegetable starved diggers, they were quite palatable.

But in correcting the error of Capt. H——, as to the native grape, I am able to confirm his statement as to the high excellence and superiority of the cultivated variety—except perhaps, as to the size of cluster and berry, which in both respects, in the specimens I saw, were rather below than above the Catawba. This was owing, perhaps, to difference of locality and culture, (mine having been grown at San Jose,) while doubtless, too, his were the better, while mine were the more indifferent specimens—which had undergone a land carriage of eighty or one hundred miles, but which were retailed readily to the miners at a dollar a pound.

I think "the California Grape" would be an acquisition with us—or rather, perhaps, farther south; but doubt whether it would maintain its high excellence in our comparatively wet and variable climate this side of the Rocky Mountains. I agree fully with those who regard the soil and climate of California highly favorable to the culture of the grape; and attribute much of the superiority of this grape to these circumstances. Yours.

T. A. S.

Syracuse, Nov. 20, 1851.

P. S. While visiting California, in the spring of 1849, I took a box of the seed of the Black Hamburgh and Early White Muscat, which were planted by the side of my log cabin, and around stumps in the vicinity. Possibly California will become celebrated at some future day, for the superiority of a *new native* grape.

REMARKS.—AS corroborative of the information in the former number, regarding the grapes at San Jose, we quote the following extract from a private letter lately received by us from an intelligent lady in San Francisco: "The neighborhood of San Jose, sixty miles south of this, must have a better climate than ours, for they are already, (September,) sending us their grapes in most picturesque *clusters a foot long*. These grapes are arranged differently upon the bunches from any I ever saw, being placed, large and small, so as to form a long, *tapering*, regular cluster. I ought to add that there is in their taste

a dash of wild flavor, like that of our Frost Grapes. But I am told they are sweet and rich, when fully ripe."

It is clearly worth some pains to get these California grapes into our gardens. Ed.

NOTES ON NEW OR SCARCE PLANTS.

HABROTHAMNUS CORYMBOSUS.—*The Corymb-flowered Habrothamnus.* This plant is an erect, much-branched shrub, with somewhat herbaceous stems, and alternate, large, ovate-lanceolate leaves, attached to the stems by a shoot-stalk. Towards the ends of the main branches smaller ones are produced, each of which is terminated by a corymb of flowers. The flowers are funnel-shaped, gradually widening upwards, then contracting, having a pitcher-shaped appearance; the limb is divided into five long narrow segments, which become reflexed. These flowers which are produced in profusion, are of a deep rose color, and very ornamental.

The Corymb-flowered Habrothamnus.

This species is a native of Mexico; and has flowered in the Royal Botanic Garden of Kew, to which it was sent by Mr. Low, of the Clapton nursery. It is a plant of very rapid growth, requiring only the protection of the green-house in the winter season, and in summer thriving freely in the open air. Plants of this nature require to be well attended when young, to cause them to produce a sufficient number of shoots to form a handsome plant; and they ought not to be planted in a soil and situation too much conducive to vigorous growth; for rapid growing plants of this half-fleshy character are found to thrive better when the development of them is not too freely induced by stimulants of this kind. A large plant of this kind would doubtless make a good display in the flower garden, as a single plant; and when so required, it must be planted out as early in the season as possible, to be safe from frost.

It belongs to the natural order of Solanaceæ; and in the Linnæan arrangement to Pentandria monogynia.—*Hort. Mag.*

ANEMONE JAPONICA.—*The Japanese Wind-Flower.* This is a very vigorous growing herbaceous perennial, of great beauty. It has the kind of compound, ternate lobed leaves, possessed by many of the Anemones, but in this case they are large, and coarse, and unequally serrated on the margin. It grows two feet high, or more, and has purplish-red flowers, scarcely inferior to those of the Chrysanthemum, or the Poppy Anemone of the East: they are, indeed, not unlike a small semi-double Dahlia bloom, and are fully as large as a small Dahlia. Its degree of hardiness is not yet ascertained, but it is expected to bear the severity of our winters,—and if so, will prove a most valuable addition to hardy border flowers. It flowers in September and October; and was introduced by the Horticultural Society, who received it from their collector, Mr. Fortune, in 1844. Mr. Fortune met with it at Shanghae, the Japanese port of China.

According to Dr. Siebold, it inhabits damp woods on the edges of rivulets, on a moun-

tain called Kissune, near the city of Miako, in Japan. It grows also at considerable elevations on the mountains in the centre of Japan, whence Siebold concludes that it will bear the rigior of a continental winter. It is much cultivated by the Japanese for its beautiful flowers.

The Japanese Wind Flower.

In the garden of the Horticultural Society, it has hitherto been kept in a pot, in a cool green-house: this was, however, on account of its scarcity, and for fear of losing it; and such treatment is by no means expected to be required. It will grow freely in any rich, light, loamy soil; and requires a considerable, rather abundant supply of water.

In the natural arrangement it ranks under Ranunculaceæ; and in the Linnæan, under Polyandria polygynia.—*Jour. Hort. Soc.*

ABELIA RUPESTRIS.—A small spreading bush, with deciduous, bright green foliage. The branches are very slender, covered with fine down, and deep reddish brown, when fully exposed to the sun. The leaves are opposite, ovate, distantly serrated, on very short stalks, quite smooth except at the midrib on the underside, where they are closely covered with short hairs. The flowers are pure white, something like those from the honeysuckle, and come in pairs from the axils of leaves belonging to the short lateral branches. At the base of the ovary stand three very small bracts. The ovary itself is slender and downy; surmounted by a calyx of five obovate ciliated sepals, which are slightly stained rose color, and rather membraneous. The corolla when expanded is half an inch long, funnel-shaped, downy, with a spreading border of five convex ovate blunt equal lobes, beyond whose tube extend four smooth filaments.

The plant is distinguishable from Abelia chinensis of Brown, by its want of involucre, smooth leaves, and not trichotomous flowers; and from the Abelia serrata of Zuccarini and Siebold, by its five leaved calyx. It has hitherto been treated as a greenhouse plant, but will probably prove hardy enough to stand out of doors in mild winters. The soil which appears most suitable is rough sandy loam, mixed with a little peat. Being of free growth, an ample supply of water is necessary during the summer season. In winter nothing different from the general treatment of greenhouse plants is required. It is propagated from cuttings of young wood, in the usual way. From its being sweet-scented, and the length of time it remains in flower, this will be of considerable importance as a greenhouse plant; and, should it prove hardy, it will doubtless be a good addition to the shrubbery in consequence of its flowering in autumn. Received from Mr. Fortune, June 20th, 1844, as a fine dwarf shrub, found amongst rocks on the Chamoo Hills, China.—*Jour. Hort. Society.*

INDIGOFERA DECORA.—A dark green handsome bush, with somewhat glaucous branches. The leaves are pinnate in from two to five pairs and an odd one, quite smooth on the upper side, but slightly covered on the under side with very fine hairs, attached by their middle; the leaflets are exactly ovate, with a short bristle at their end, between 1¼ and 2 inches long, of a very dark green color; and to each pair there are two short bristle-like stipules. The flowers grow from the axils of the leaves in horizontal racemes much shor-

ter than the leaves themselves; they are of a light rose color and very handsome. The calyx is a flat membranous five-toothed cup, with the two upper teeth very far apart. The standard of the corolla is oblong, nearly flat, very slightly keeled behind, nearly white, but pencilled with delicate crimson lines near the base; in length it is equal to the wings and keel, and forms with them an angle of about 45° when expanded; the wings are narrowly lanceolate and ciliated, of a pale bright rose color; the keel is rather paler, and bordered with a woolly or very downy upper edge. It is a greenhouse plant which will grow freely in almost any sort of soil, especially sandy peat. In summer an ample supply of water is required, and air at all times when the weather is favorable. To prevent the leaves from being scorched by the sun, it will be necessary to use shading. In winter, water should only be given when the soil becomes dry. It strikes freely from cuttings under ordinary treatment.

[This is one of the prettiest plants brought from China by Mr. FORTUNE. We saw it in the garden of the London Hort. Society, last year, blooming very freely, and thought it one of the loveliest of the new hardy plants. It had stood the winter on a piece of dry rock work, and there can scarcely be a doubt of its hadiness here. ED.]

NOTES ON EVERGREEN TREES.

THE Deodar Cedar is the most popular of all the new evergreens yet proved in this country. It deserves its popularity. It is at once the most hardy, the most beautiful, and the most rapid growing of them all.

The largest trees of the Deodara that we have in any of our nurseries, are in Mr. HANCOCK'S grounds, near Burlington, N. J. This cultivator has perhaps 400 trees from four to five feet high. The soil in which they stand is a sandy loam. They were imported from France two years ago, and are now growing in the open nursery rows. The vigor and beauty of these trees is surprising. Some of them have made shoots nearly three feet long the present season. They all begin to assume that drooping, elegant habit, which makes this the most graceful of evergreen trees. And, as they grow older, the silvery tone of the foliage is also more conspicuous. Everybody is planting Deodars, and all the nurserymen are busy, importing and propagating them. Messrs. PARSONS have, we understand, a stock for about four thousand young plants, one year established. Every large nursery in the country now advertise it, and the Deodar or Sacred Cedar of India, will in a few years we hope, be found in every ornamental plantation in the country.

We are glad to notice the *Hemlock* attracting more attention. It is the finest evergreen tree indigenous to North America—for ornamental purposes. A great many persons, who only know the Hemlock in the woods, affect a contempt for it as an ornamental tree. They think it "scraggy, ugly, and wild-looking." They only show their ignorance. Have they ever seen a Hemlock planted in the midst of a piece of smooth lawn—the soil a deep loam and the site favorable? No. Then they have yet to discover how full of symmetry, how finely proportioned, how graceful, how rich and dark a green in winter, how pure and soft a green in spring is the Hemlock. In fact it is as handsome as the Deodar—and is very much like it. The latter droops more and is *silvery* in its foliage, instead of *bronzy*, —but they are much alike otherwise, and are the best possible companions in the pleasure grounds.

A third tree that is worthy of high praise is one that comes to us from the mountains

near Monterey—the evergreen Cypress. (*Taxodium sempervirens.*) But it is only fit for ornamental grounds south of Philadelphia. At Baltimore, Washington, and all south and west of that, it will be a great acquisition. North of Philadelphia—except in very favored spots, it is injured by the winters. In the south of France, at Angers—the climate of which is about as mild as that of Norfolk, it succeeds admirably. From a paper on this tree by our correspondent there, M. DESPORTES, we translate the following account of the habits of the tree.

The evergreen Cypress is undoubtedly one of the most gigantic of coniferous trees, attaining the height of 300 feet. The wood of this Taxodium is invaluable for timber—and is called by the settlers in that part of California where it grows—Red-wood—or bastard Cedar. Even in the midst of these thick forests, it attains a height of 180 feet. The trunk has a circumference of from 15 feet to 21 feet; it grows in the forests as straight as an arrow, and is naked of branches to the height of 60 or 70 feet. One of these trees has been measured, which was 51 feet in circumference at six feet above the ground! The bark is very thick, the wood is of a beautiful red color, (like that used in making lead pencils;) the grain is fine, the texture light, but breaks easily. It has the property even if used unseasoned, of not warping and not being attacked by insects. All its qualities render it extremely proper for both exterior and interior work. It is, consequently, an important article of exportation, and a great quantity of the wood is annually sent to Santa Cruz for that purpose.

Besides this account of its indigenous character, M. DESPORTES adds that is not only perfectly hardy at Angers, but that it is much the most *rapid growing* hardy evergreen (coniferous) tree yet known. A specimen planted in M. LEROY'S nursery, in 1845, in five years has attained a height of 21 feet. The diameter of the trunk near the ground is 20 inches. Another tree is 25 feet high, in a lighter soil. The branches covered with rich dark green foliage fall in rich festoons to the earth, and produce the most picturesque effect. Besides being one of the most ornamental of evergreens, the evergreen Cypress, continues M. DESPORTES, is one of the easiest of reproduction. Although but lately introduced into France, the nurseries are already well stocked with them. Some specimens that have been planted in the park show that it is destined to be a tree in great demand.

This tree is so hardy at Angers that M. DESPORTES commends it seriously to those who plant timber for profit. We can only urge our readers south of Philadelphia to lose no time in planting it in their garden scenery.

A NEW STRAWBERRY FROM THE SOUTH.

BY R. G. PARDEE, PALMYRA, N. Y.

I received per steamer Georgia, last month, from New-Orleans, a box of strawberry plants, of a new and remarkable variety.

My attention was first called to them about six months ago, by the editorial comments of the New-Orleans papers, representing them as of very large size, luscious flavor, combined with an extraordinary habit of profuse, constant bearing, during a period of six to seven months in each year.

Supposing there might be some mistake about it, yet I considered it worthy of investigation, and accordingly I sought a correspondence with the originator of the seedling, who, by the way, I am assured, is a gentleman of character, intelligence, and fortune.

During an extended correspondence of some months, he politely favored me with the following facts.

After trying various experiments with the strawberry, during a term of years, he at last succeeded in obtaining some, four or five years ago, a cross between Myatt's British Queen and Keen's Seedling, which proves to be all he desired, and he has named it the "*Crescent Seedling*." He assures me that the plant keeps in constant bearing each year, from Christmas to the 15th July, in the vicinity of New-Orleans, without exhausting the plant; and he adds, "I neither cut off the blossoms, nor any part of them, to increase their bearing—it is one continued crop from the "*first jump*." So remarkably prolific are they with me, that for six months the same plant is in *blossom*, *unripe* and *ripe* fruit together—so that at the expiration of the fruiting season, the plants are completely worn out, but not until they make three or four runners, each with which I plant anew each succeeding year—all the *old stools die out*. They are now, (9th Nov.) coming into blossom, and will so continue until July or August. The fruit is very large, often measuring five and a half inches in circumference, conical, the color a dark red, and highly flavored. I cultivate them in hills 30 inches apart each way, and have half an acre under cultivation at this time."

He further adds—"I freely admit that I consider their extraordinary bearing qualities purely accidental, and you will at once remark how different the *leaf* and its *thickness* is to every plant of its species you have heretofore seen."

The last remark is strikingly true of the plant, which has the thinnest and most delicate leaf imaginable, and yet the color and habit of the plant is very luxuriant. After one or two failures, I have at last succeeded in getting on a dozen plants in fine growing order, and I shall with much care and interest watch their development, if not with full confidence.

If their fruiting season as far north as this, can be extended through the hot months of June, July and August, it will certainly prove a great acquisition to the north.

R. G. PARDEE.

Palmyra, N. Y., Dec. 12, 1851.

ON THE PRIZES AT OUR HORTICULTURAL SHOWS.

BY A WORKING GARDENER, PHILADELPHIA.

DEAR SIR—I believe if gardeners would interest themselves more in diffusing a knowledge of the culture of plants in general, it would promote not only a higher state of culture, but induce many to put a hand to the plough, who, for fear of failing through incompetency, would glean a knowledge of what they *really love*, and shortly become true devotees to Flora. The gardeners of England, whose ambition it is to excel each other in a higher state of culture, are a class of men who accustom themselves to read, write, investigate and question, through their communicating channel, the *Gardener's Chronicle*, drawn on by their great leader, LINDLEY. Hence they arrive at true principles, and practical information. Seeing in your pages the spirit of improvement, I am convinced of your willingness to assist, and your ability to lead gardeners in this country, to a higher state of things. Under that impression I have been induced to write the following remarks on horticultural exhibitions, believing them to be the *effectual* means of working out a more elevated state in horticulture. As gardeners have no *direct* influence with the gentlemen of those societies, it is only through such channels as your valuable Journal, that they can

get their suggestions brought before the respectful notice of those who have the power of carrying into effect that which they consider essential.

The Pennsylvania Society, I believe, stands first in the annals of American Horticulture. I was present at the annual meeting, and beheld two noble saloons filled with fruits, vegetables, and plants. Plants! did I say,—yes plants, (but what had become of their flowers I can't pretend to say.) Whoever has witnessed a Chiswick exhibition in the great metropolis of England, or a Regent's Park show, will contrast the difference between the two. He will contrast the difference between a plant five or six feet high, and as much in the diameter of its branches, regularly trained from the rim of the pot, without a stick, into a symmetrical bush, densely covered with flowers, and such as filled the saloons of the show in Philadelphia.

The latter plants had unshapely heads set upon branchless stems three or four feet high, denoting a system of being *grown by the yard;* contrast the difference between what we call exhibition plants on the two sides of the Atlantic, and then let us ask if a step in advance is not required here? But there was a time when the metropolitan exhibitions of England had their commencement. There was a time when the gardeners of England exhibited plants resembling hop poles; there was a time when *their* plants appeared to be *grown by the yurd;* there was a time when their pots were full of sticks, instead of flowers, and there was a time when all this was thought to be *gardening in perfection.* But the *glory* and ignorance of that day have all passed, and are only remembered as a dream. Now, the hop poles are reduced to symmetrical plants, the shower of sticks is annihilated by a short, stiff, self-supporting truss, and the plant itself defies you to detect any irregularity, or any want of inherent strength and beauty. And what has worked this great change? Nothing but a liberal spirit of competition. Not competition for money, nor medals, but for ability; and this is the kind of competition we want here; some of our competitors may ask, is there no ability displayed in our fruit department? I answer none; that which you exhibit by the *peck* and the *bushel*, certainly has not occupied much of your attention. It is art combined with nature, that shows man's abilities. Nature produces the bunch of Hamburghs, but it is by man's assisting ingenuity that the full amount of coloring matter is produced there. We certainly can produce fine peaches, pears, apples, and good native grapes; and what tailor, I ask, in the United States, can't do the same?

He who makes Horticulture his profession, surely should excel the non-professional man. But alas! still the Hamburghs are *red*,* huddled together like marrow-fat peas, and polished as though they were intended for mirrors. Can't this be altered—can't the gardeners of America produce as high a colored bunch of grapes as those of England? Certainly if they like. Nature has laid a bounteous soil, a bright sun and a clear sky, and these are superior advantages to those of England. Then try what can be done. I think I hear the gardening voice of this mighty country crying, "A new beginning with the new year,"—let us see by our culture that the finger and thumb have superceded the knife. Let us question the utility in allowing a branch to grow to be cut back by the knife and thrown away; let us see plants grown in pots without long unsightly stems, and grown into compact globular bushes by finger and thumb pruning. Show the nurserymen how to produce flowering plants, instead of bits tied up to sticks three times larger than the *so called* plant itself. But, say the gardeners, the inducements are not held out to us by our Societies—the arrangement of our Horticultural Society is too limi-

* Though there is some truth in our correspondent's criticism of the Philadelphia shows—we are bound to say that nowhere in Europe are finer foreign grapes to be seen than at the Boston exhibitions. Ed.

ted in each class, and the Society allows the nurseryman to compete with the amateur and gardener, therefore a gardener who grows fifty plants has no chance with a nurseryman, who grows a thousand. Again, there is no distinction as to what are required—the "*best collection*," leaves you at liberty to furnish what *kind* of plants you like. I am growing a few greenhouse plants and they may be good—my neighbor, who has a little more convenience than me, when competing, may add an exotic or two, or an Orchidæ, and if so my plants are thrown in the shade and unnoticed, and then I go away determined not to exhibit any more. Now were our society to establish a classified arrangement, and were each class to have three or four prizes, stating the number of plants required to each class thus: Pelargoniums, for the best 12 in 8 inch pots, 3 prizes; for the best 8 in 8 inch pots, 3 prizes; for the best 6 in 6 inch pots, 3 prizes; for the best single specimen in 10 inch pot, 3 prizes; and in like manner with fruit and vegetables, as well as plants, every man would stand an equal chance, and we should have better plant growing, more plant selling—more competition, altogether more satisfaction. The saloons would also be better filled with flowering plants. If my memory serves me correctly, our society intend to offer a premium, in 1852, for the best forty Dahlias. Now what chance will an amateur or gardener have for that prize? It is not very probable that the best cultivator will get it, but he who grows the greatest quantity—and I think to large growers, they would have found 24 sufficient, and there would be double the competition. We ought to have a chance at 12 and 6, with the best single specimen of any color, and to run out in classes as before mentioned. This would increase the sale, the quantity to be exhibited, a love to cultivate and improve. In like manner does the whole schedule require a proper *classification*, in order that each subscribing gardener may have a chance to display his ability.

I feel perfectly convinced that if gardeners had any means of bringing their ideas before the committee, those gentlemen would gladly accede to anything that would tend to improvement, and I think there is great room. "Floral Designs" seem to be the principal feature at the annual meeting; $30 and $40 are given for the first and second best design, a thing in my opinion not at all connected with Horticulture, but which any *weaver* may devise. [We quite agree with our correspondent about the tastefulness of these designs, and the folly of paying for them. Ed.] I was told that the Secretary actually paid $30 for a design in the September meeting, that I think was a most excellent representation of a *toad stool*, by the side of which perhaps stood a specimen plant that had taken months to grow it, and all the vigilance and care it is possible for man to bestow on it, in keeping in perfection for the specified time, and all for one dollar; or perhaps "a collection," for a little more. Is there no alteration required in this respect?

The above remarks are not written from any party feeling, but purely for the benefit of all, believing such an arrangement would best suit the necessities of exhibitors.

Yours very respectfully,

A Working Gardener.

Near Philadelphia, Dec. 2, 1851.

A CHAPTER ON DOGS.

BY AN ENGLISH REVIEWER.

[We condense from a capital English review of M. BLAZE'S work on Dogs, the following chapter—which we are certain will be read with great pleasure by all our readers in the country.]

THE dog alone, of all the brute creation, shows a perfect attachment—alone understands our wishes, adapts himself to our habits, waits upon our commands, associates with us as a friend. The service of man, while a single link of the connexion remains, is a necessity of his existence. The Siberian dogs, set free in summer to shift for themselves, though overtasked, treated with brutality, and nearly starved, return to their masters at the approach of winter, to be harnessed to the sledge. The Pariah dog of India, when homeless and unowned, will fasten on a stranger, and exhaust every art to induce him to adopt it. Colonel Hamilton Smith tells of one that fixed his regards on a gentleman traveling rapidly in a palanquin, and continued to follow him with wistful eyes, till he dropped with fatigue. No one can question that this disposition of the dog is a peculiar gift of Providence for the benefit of our race. Other animals surpass him in beauty and strength, yet in every quarter of the globe, the dog alone is in alliance with man, because he is alone endowed with that impulse that renders him accessible to our advances, and submissive to our will. His domestication, in the opinion of Cuvier, is the most complete, the most useful, the most singular conquest we have achieved, and perhaps, he adds, essential to the establishment of society.

The vast power and courage of certain races of the dog are truly extraordinary. The story told by Pliny of an Albanian dog of Alexander the Great, who conquered, one after another, a lion and an elephant, is probably a fable, like the addition of Ælian, that his tail, his legs, and his head, were severally amputated without loosening his hold, or producing even an appearance of pain. As little do we credit the feats of a mastiff in the reign of Elizabeth, who was reported to have fought and beaten in succession, a bear, a leopard and a lion. But there are better grounds for believing that one of this species really engaged the king of beasts in the reign of Henry VII., who absurdly ordered him to be hanged for his presumption: and it has been frequently proved that three or four can carry off the victory. Colonel Hamilton Smith was witness of a scene between a bull-dog and a bison, in which the former seized the latter by the nose, and kept his hold till the infuriated animal crushed him to death. The terrier grapples with beasts of twenty times his size, and, however cruelly mangled, dies without a groan. It is thus that the dog, who provides the savage with food by his swiftness, protects him by his bravery. Such prowess and endurance belong to few of our domestic breeds. But nature develops the faculties which the occasion demands. The dogs that live amidst wilds and dangers are all conspicuous for hardihood, daring, and insensibility to pain. Their cunning and sagacity are in like manner proportioned to their needs. The dogs by the Nile drink while running to escape the crocodiles. When those of New-Orleans wish to cross the Mississippi, they bark at the river's edge to attract the alligators, who are no sooner drawn from their scattered haunts, and concentrated on the spot, than the dogs set off at full speed and plunge into the water higher up the stream. An Esquimaux dog, that was brought to this country, was given to artifices which are rarely seen in the native Europeans, whose subsistence does not depend on their own resources—strewing his food round him, and feigning sleep, in order to allure fowls and rats, which he never failed to add to his store.

But even with us, the dogs who hunt on their own account, display an ingenuity which is seldom attained by those who hunt for a master. The wily lurcher, who, more than any other dog, is addicted to poaching, when he puts up a rabbit, makes for her burrow, and there awaits her arrival. M. Blaze had two dogs that hunted by stealth, of whom one started the hare, and the other, concealed behind a fence, pounced on her as she passed through her accustomed run. A story is told of a pointer and a greyhound who combined together—the greyhound availing himself of the scent of the pointer to find the game, the pointer of the speed of his associate to catch it. The pointer becoming suspected was furnished with a chain to impede his movements; and still continuing his roving life, it was at length discovered that the greyhound, in order to enable him to hunt us usual, carried the chain in his mouth, till he himself was called upon to take up the chase. The skill of the common hound, though less striking, is still proportioned to the exigencies of the service, and is something more than a mere instinct; for when a young dog is entirely at fault, one experienced in the craft, will detect the doublings of the fox or the stag, the devices to break the scent, or the attempts to divert it, by starting another animal. It is practice which has taught him to unravel the intricacies of the chase, to distinguish between conflicting scents, to divine the *ruse* of a fugitive that is fertile in resources. In one thing, however, old dogs and young, tame dogs and wild, are all alike, and that is in the interest they take in sport. The symptoms of preparation never fail to produce in them the most lively transports. The dog whose master is accidentally prevented from taking the field, will often seek out a neighboring sportsman, and enlist in his service for the day, though it would be a vain effort to entice him for any other object, and equally vain to attempt to retain him when the sport was at an end. Even in the company of his master, true as he is to his allegiance, he will attach himself for the occasion to a total stranger, who chances to be a better shot; and yet, far from deriving any advantage from the result, he entertains a dislike for the bones of game, which he eats, when he eats them at all, with the reluctant air that shows them to be distasteful.

As a carrier of merchandize, the most delicate task which a dog has to perform is in the inland smuggling trade of the Continent. In this arduous service, which is constantly fatal to him, he shows a wonderful sagacity. Loaded with goods he sets out in the night, scents the custom-house officer, attacks him if he can take him at a disadvantage, and conceals himself, if escape is difficult, behind a bush or tree. On his arrival at his destination he will not show himself till he has first ascertained that the coast is clear, and while he remains gives warning of the approach of the common enemy. It is manifest that a whole army of custom-house officers can do little towards exterminating smugglers, of whom the supply is unlimited, who cross the frontiers in silence and darkness, whose road is the pathless wood and plain, who snuff danger in the wind, and who either evade it by their swiftness, or find a lurking place in every hedge row.

We turn with pleasure from the illicit functions in which the monopoly of guilt and profit is to the man, and that of peril and suffering to his faithful animal. The shepherd's dog in his own department, is a perfect miracle of intelligence. He understands the sign, the voice, the look of his master. He collects the scattered sheep at the slightest signal, separates any one that is indicated from the rest of the flock, drives them wherever he is told, and keeps them all the while under perfect control, less by his active exertions than by the modulations of his voice, which expresses every tone, from gentle instruction to angry menace. These are his ordinary performances, visible every day in a thousand pastures. But he can do greater wonders. It chanced one night that seven hundred lambs, committed to the keeping of the Ettrick Shepherd, broke loose from his control and scam-

pered away in three divisions over hill and plain. 'Sirrah, my man,' said Hogg mournfully to his *colly*, meaning it for an expression of grief, and not for a direction, they're awa.' Silently, and without his master's knowledge, for it was too dark to see, the dog left his side, while the shepherd passed the hours till morning in a weary and fruitless search after his wandering charge. At the dawn of day he was about to return to his employer with a heart full of despair, when he caught a sight of Sirrah guarding at the bottom of a deep ravine, not, as he at first supposed, one division of the lambs, but the whole of the vast flock, without a solitary exception. 'It was,' says James Hogg, 'the most extraordinary circumstance that had ever occurred in my pastoral life. How he had got all the divisions collected in the dark, is beyond my comprehension. The charge was left entirely to himself, from midnight until the rising of the sun, and if all the shepherds in the Forest had been there to have assisted him, they could not have effected it with greater propriety.' On another occasion the same famous shepherd saw a dog, when it was utterly dark, put upon the path of a ewe that had been lost by her owner near a neighbor's farm, and which was supposed to have mingled with her fellows that were feeding in the surrounding pastures. 'Chieftain,' said the master of the dog, pointing to the spot from which the sheep had gone off, 'fetch that, I say, sir—bring that back; away!' And away he went, and back he brought in half an hour the identical sheep. A sheep-stealer who was at last discovered and hanged, used to carry on his trade by secretly signifying the particular sheep that he wanted out of a large flock, as he viewed them under the pretence of purchasing, to his dog, who returning by himself, a distance of several miles, at night drove the selected sheep, which were undoubtedly the fattest, to his fastidious owner. Both Scott and Hogg relate this picturesque story most circumstantially from the annals of the Justiciary Court in Scotland. Sir Thomas Wilde knew an instance in which three oxen out of some score had mingled with another herd. 'Go fetch them,' was all the instruction the drover gave his dog, and he instantly brought along with him those very three. A cattle dealer, accustomed to drive his beasts for nine miles, to Alston in Cumberland, once for a wager, sent them alone with his dog. The animal perfectly understood his commission. He kept the straight road, ran when he came to a strange drove, to the head of his own, to stop their progress, put the beasts that blocked the path upon one side, then was back again to the rear, to hie on his charge, and thus adroitly steering his way and keeping his herd together, he carried them safely to the destined yard, and signified their arrival by barking at the door of the dwelling. More than this, the dog will on emergencies, volunteer services which occur to none but himself. One has been known of his own accord, to overtake a runaway horse, sieze his bridle, and hold him fast till he was secured. Lately, in France, a stable took fire that was full of cattle, and, as usual, the animals, stricken with terror, refused to stir. It caught the eye of the farmer's dog, who rushed in, and by barks and bites, forced out at two several charges, the greater part of the beasts, and went back a third time for a few remaining sheep, when the flames had made such progress that they were already dead.

It may be questioned after all, whether the sagacity of the dog in keeping sheep is equal to his sagacity when he has taken to kill them, a vice that is incorrigible when once contracted, admitting no other remedy than the death of the culprit. The dexterity by which he endeavors, as if aware of the consequences, to escape detection, is not surpassed, and hardly equalled, by human felons. Sir Thomas Wilde was cognisant of a case in which the dog had learnt to slip off his collar and put it on again when he returned from his nocturnal depredations. In a similar instance, the animal took the additional precaution of washing his bloody jaws in a stream, unless indeed, the supposed act of cunning was sim-

ply the result of thirst. Bewick, in his History of Quadrupeds, mentions a dog that for three months committed havoc on every side, in defiance of the most strenuous exertions to effect his destruction. His habit was to sit on a hill from whence he could command a view of the surrounding roads, and have time to escape at the approach of danger. On this watch-tower in which he placed his security, he was at last shot.

The true house-dog is more amiable, and equally efficient. It has been absurdly affirmed that his value is proportioned to his timidity, because he is thereby rendered doubly clamorous, from his anxiety to obtain protection for himself. But such a dog is of as little service in indicating danger, as an alarm-bell would be that was rung unceasingly. He barks at every thing—the wind and the moon, as well as the thief, and either keeps you in perpetual terror, or teaches you to neglect his warnings altogether. Neither is there no alternative between silence and cowardice. Every one that has had to do with dogs, must be well aware that many breeds which give a loud alarm, are models of bravery. In general, however, the quiet dog, like the quiet soldier, is the most determined. The house-dog is capable of being brought by education, to any degree of perfection. From his kennel in the court-yard, he distinguishes the habitual inmate from the occasional visitor, the visitor from the stranger, the stranger from the thief, as is easily gathered from his monitory bark. His hearing is probably the principal sense by which he conducts this delicate analysis, recognising the step of those who frequent the house, and with others discerning the firm and honest tread of innocence from the doubtful, hesitating, stealthy pace of timid guilt. His temper is too often soured by his being constantly chained, and then he becomes indiscriminate in his attacks, and is liable to fly upon any body he can reach. But when judiciously treated, he is a rare combination of fidelity to his master and humanity to others. It is no uncommon thing for him to attend the thief through the premises, without on the one hand permitting him to touch a single article, or on the other, attempting to molest or detain him. Still, where the intention is clearly criminal, the courtesy of the dog is by no means to be reckoned on; for if he forbears to bite, he is apt to drive the depredator into a corner, and keep him shivering with fear and cold, till assistance is procured. When his master is in question, his courage rises to a pitch of heroism. Petrarch had a dog that snatched a naked sword from the hand of a villain who attacked him. Some thieves in France, laid one night a leg of mutton on the road, to detain the dog of a traveller, whom, when he had got some distance from his protector, they robbed and murdered. The dog arrived from his repast before the thieves had escaped, and engaged them in battle. It was in vain they fired at him. He continued to fight till he strangled one, and drove the other into a tree, at the foot of which he steadfastly remained till the officers of justice relieved him of his prisoner on the following day.

A long train of anecdotes attest the retentive memory of the dog for the assassin of his master, and the vengeance he takes on him. The first is that related by Plutarch, in which king Pyrrhus made his army defile before a dog, who for three days guarded a murdered corpse, without eating or drinking, and who seized the culprit as he passed along. The most notorious is the story of the dog of Montargis, who dragged his master's friend to the spot where he was buried, flew on the assassin wherever he met him, and finally overcame him in a single combat which took place by the orders of Louis VIII. Benvenuto Cellini, who, notwithstanding that his vanity and superstition have often seduced him into the belief of absurditics, appears, nevertheless, not to have exaggerated his impressions, has given a graphic narrative of an incident which happened to himself. A thief one night broke into his shop. The dog contended with the culprit, though he

was armed with a sword, and next running into the journeymen's chamber, awoke them by drawing off the bed clothes, and pulling them alternately by the arm. The men, not comprehending the cause of his importunity, drove him from the room and locked the door. Nothing daunted he returned to the charge, and overtaking the thief who had retreated into the street, he held him by the cloak. The fellow had the wit to cry out *mad dog*, which brought the loiterers to his assistance, and for this time he escaped. After a considerable interval, as Cellini was walking in one of the squares of Rome, his dog flew on a young man, and endeavorad to tear him to pieces, in spite of the sticks and swords that were brought to his defence. The dog was got off with great difficulty, and the man was retiring, when some bundles fell from under his cloak, in one of which Cellini espied a little ring of his own. 'This is the villain,' he exclaimed, 'that broke open my shop, and my dog knows him again;' and he once more let loose the animal—but the thief lost no time in imploring mercy, and confessing his crime.

The most mysterious faculty of the dog, one that approaches to divination, is yet to be told. A dog of Henry III. of France, was perfectly furious toward the regicide Clement, as he advanced to the audience in which he slew his sovereign, and could with difficulty be retained in an adjoining room. The mere nastiness of the monk may have excited the bile of the dog. But there is an equally celebrated case, in which an English mastiff, who had never attracted the regards of his master, followed him one night to bed, and though repeatedly repulsed, could not be quieted till he got permission to remain. That same night an Italian valet entered his master's room with a design to murder him, and was only prevented by the faithful sentinel pinning him to the ground. The solution must be looked for either in the minute observation of the dog, which leads him to notice circumstances that escape our eyes, or else in a conjecture adopted by M. Blaze, that the emotion of a man who medidates a crime produces a peculiar odor from his body.

The dog who prevents your property from being stolen, will sometimes recover it when lost. A lady in Bath found her road blockaded by a strange mastiff, who compelled her to retrace her steps, and brought her to the spot where she had dropped a shawl, which he no sooner saw in her possession, than he galloped away. A boy who let fall some cakes from a basket, found, on his arrival at home that the greater part had been gathered up by his dog, who deposited them untasted, and then set off to fetch the remainder. Mr. Bell, in his 'History of British Quadrupeds,' mentions that a friend of his own dropped a louis-d'or one morning, as he was on the point of going out. On returning late at night he was told by his servant that the dog had fallen sick, and refused to eat; 'and what,' says Mr. Bell, 'appeared very strange, she would not suffer him to take her food away from before her, but had been lying with her nose close to the vessel, without attempting to touch it. On my friend's entering the room, she instantly jumped upon him, laid the money at his feet, and began to devour her victuals with great voracity. An affecting story has frequently been told of a dog who persevered in leaping upon the horse of a traveller, to call his attention to his money, which he had left on a bank where he halted to rest. His master, imagining he was mad, shot the poor animal, who retired to die upon the purse. Some dogs possess a singular knack of hunting out anything that has recently been in the possession of their masters. There is one ludicrous anecdote of this faculty, which we fear is too good to be true. A gentleman made a bet that his dog would identify a franc that he threw down upon the Boulevards at Paris. Before the dog had discovered the money, a passenger picked it up. Presently the dog caught the scent, followed him to his hotel, remained with him all day, and attended him to bed, to the great delight of his newly constituted master, who was extremely flattered by his sudden attachment. But the

moment the gentleman pulled off his small-clothes, in the pocket of which he had placed the franc, the dog barked at the door as if desirous to go out. The door was opened, the dog caught the breeches, and rushed away to his rightful master. Shortly afterwards arrived, all *deshabille*, the owner of the breeches, trembling for a purse of gold that lay in the same pocket with the important franc. The dog is not always upon the side of the aggressed. There is no weapon of defence which cannot be converted into a weapon of attack, and so it is with an animal that can be formed to any thing at the pleasure of his master. Highwaymen have accordingly taught him to aid them in their violence, and pickpockets to filch from counters, and seize reticules in the streets.

Edwin Landseer happily called the Newfoundland dog 'a Distinguished Member of the Humane Society;' and he has richly earned the tribute that has been paid to him by that happy genius. His element is water, and his business to rescue those who are not at home in it as himself. This propensity of his nature is sometimes carried to a laughable excess. There was a Newfoundlander at Paris that would not even suffer that any one should bathe. He promenaded along the banks of the Seine, plunged in after the swimmers, and encumbered them with his help. While he was allowed to go at large no one could enjoy the luxury of a bath without being forcibly hurried back to land. Hence his officious zeal requires no stimulus when the danger is real. Nor is it a mechanical impulse. There have been instances in which he has summoned assistance when he has been insufficient by himself, or when no one was at hand to recover the object of his care. He counts his own life nothing in his generous efforts. He will make an attempt to carry a rope from a sinking vessel to the shore, though the sea rages to a degree that renders it impossible for him to stem the tide.

There is no sacrifice of which a dog is not capable on behalf of his master. The dread of fire is overwhelming with animals, and yet, (as we have already seen,) he has been found occasionally to brave the flames. It Libourne, in France, in 1835, one of the townsmen gave an old suit of clothes to dress up an effigy. His dog happened to be by when it was burnt, and taking it for his master, he jumped upon the fire again and again to tear it away, biting those who attempted to retain him, and would have been burnt to death unless his master had appeared.

Devoted to his master in life, the dog mourns him in death. There are few fields of battle which do not present him watching and moaning by the side of a master that has fallen in the fight. Wordsworth has consecrated a poem to the fidelity of the animal who was found whining over the skeleton of a traveller who had perished in the mountains of Cumberland three months before:—

> 'How nourished there through such long time
> He knows, who gave that love sublime;
> And gave that strength of feeling great
> Above all human estimate.'

Still more affecting is the fate of a dog related by Daniel in his 'Rural Sports.' He belonged to a magistrate who was thrown into prison during the French Revolution. Denied admittance to the dungeon, he waited day after day at the prison gate, till he won upon the affections of the jailer. Put out every night, he returned every morning. He attended his master through the scenes of his trial and death, and accompanied him to his burial-place. At the end of three months he refused to eat, and began to dig up the earth which separated him from the being he loved. His strength declined as he approached the body, he shrieked in his exertions to complete his task, and expired in the midst of his convulsive efforts.

Much has been written to demonstrate that the dog can even attain to the comprehen-

sion of the ordinary conversation between man and man. Gall declares that he had often spoken purposely of objects which might interest his dog, taking care not to mention his name, or make any intonation or gesture which might awaken his attention, and that he showed by his behavior that he understood what was said. Lord Brougham says that a most accurate and literal person gave him an account of which the substance was that his shooting-dogs discovered by what they heard that he intended to go into Nottinghamshire on the following day. A mother asked her boy to fetch his sisters clothes, and on his refusing peevishly, she said, to reproach him, 'Oh, Mungo will fetch them;' and the dog immediately executed the commission. We agree with Lord Brougham that these instances of presumed interpretation of our language are probably due to the microscopic eye of the dog for what passes around him, though, as he justly remarks, this only illustrates the more how well animals can profit by experience, and draw correct inferences from things observed by them. Where the words are addressed immediately to himself, it is not difficult to determine that he collects their purport either from the introduction of some well-learnt phrases, or from the tone and action which accompanies them. To take an example which at first sight appears to support the higher view of the understanding of the dog. M. Blaze having one day lost his road, a peasant offered him his dog to escort him to a certain house. 'Take the gentleman,' he said, turning to the animal, 'to such a place, but don't go in, mind you, and come back directly,'—then to M. Blaze, 'I tell him not to go in, because he would fight with the other dogs.' The dog did as he was bid, conducted M. Blaze to the house and returned to his master. Here it is clear that the house to which he was sent was a familiar word like his own name, and equally clear that he had been often scolded for venturing within its precincts, and embroiling himself with his kindred, so that he would readily comprehend the scope of the prohibition from the monitory voice with which it was uttered. It was certainly a beautiful display of docility; but as regards the capacity of a dog to catch the meaning of words, it proves nothing more than that he attaches ideas to a few customary, well-defined, and expressive sounds. He would seem, however, to have an accurate sense of the lapse of time. That he distingushes Sunday is nothing. Everything wears such a different aspect that he might identify it at a glance. But he is also conscious of the recurrence of any other day of the week. A dog that belongs to the brother of Sir Thomas Wilde, runs away on the Saturday night, and remains from home till the Monday morning, in order to escape being chained on Sunday. Southey says, in his 'Omniana,' that he knew of a dog which grew up with a Catholic, and was sold to a Protestant, that would never eat on a Friday. His grandfather had one which every Saturday, (the killing day of the week,) went a couple of miles to pick up offal at the butcher's shop. A bull-dog mentioned by M. Blaze, who was accustomed to go on the same errand, kept to the propitious hour, as well as the day. This dog was always present at family prayers, and when the last *Pater* was commenced, he got up and stood at the door, that he might be ready to go out at the instant it was opened. We suspect that he was instructed here by a slight movement in the circle, or by a variation in the pitch of reading; and not, as M. Blaze infers, by his ability to count the number of *Paters*. The dog also recognizes colors. Prisoners have written letters, according to M. Blaze, on yellow, red, or blue paper, and sent them by their dogs, who knew by the tint to whom they were addressed. It is certain that the dog with a little training makes an excellent messenger. Mr. Kirby mentions in his Bridgewater Treatise that one that was accustomed to carry packets to a house went to the kitchen to be fed when he had deposited his charge, and, as soon as he had done, appeared barking at the parlor window, to give notice that he was ready to return. Some have gone so far as to knock at the door, or ring the bell. The

Spanish writer quoted by Lord Brougham, says that a friend was wont when he called to leave his mastiff at the door of the house, and the animal, in imitation of his master, pulled the bell in order to get in. The dog of a shop-keeper, who ran in and out of the street-door during the week, had always recourse to the knocker on Sunday when it was shut. Priscilla Wakefield, who tells this anecdote, adds two or three more of the same nature. M. Blaze knew a dog whose habit was, not to ring the bell, but to answer it. He regularly followed the servant from the kitchen to the door, and the visitor from the door to the parlor. In his old age, becoming too deaf to hear the sound, he took up his quaters where he could see the bell, that by watching its motion he might continue to know when anybody called.

The dog possesses the to us incomprehensible instinct—in common, however, with other animals,—of finding his way by a road that he has never traversed. Mr. Blain tells of a dog that was sent by sea from London to Scotland, and escaped back to the metropolis by land. Boisrot de Lacour, a French writer on the chase, took a terrier from Rochefort to Paris, and though the dog made the journey in a carriage, and slept all the way, he returned when he was liberated, to his former master. Once again he borrowed a hound of a brother sportsman, who resided at a considerable distance; the next day, when he was let out to hunt, he slipped away and ran off home, not, as was discovered, by the road he had been brought, but in a straight line across flood and field. M. Blaze calls this instinct a sixth sense, of which we can frame no sort of idea. 'Experience, however,' he continues, 'demonstrates that it exists. The camel conducts his master three hundred leagues through the sands of the desert, where there is no track to guide him. The pigeon carries letters through the pathless air. The birds of passage born in Europe emigrate to India; and, what is remarkable, travel ordinarily without their parents, who have made the voyage before. The horse finds his road across the snow; and probably all animals have the same faculty.' On the other hand, an extraordinary circumstance, related by Dupont de Nemours, in a memoir read before the French Institute, can only be attributed to the effects of intelligence. The dog in question was the property of a shoe-black at Paris, whose trade he sustained by dipping his paws into the mud and soiling the shoes of the first person that passed along. If the pedestrian continued his progress, he dirtied the next; if he stopped to have the mischief repaired, he remained quiet till his master was at leisure for a fresh customer, and then the game recommenced. He was purchased by an Englishman, enchanted by his cleverness, and taken to London. He contrived to escape, went to the inn where the coach that brought him put up, followed it back to Dover, and, after crossing in a packet-boat to Calais, again placed himself in the wake of a carriage, which pioneered him to Paris. One habit of dogs, that of deserting a town an hour or two before an earthquake, which is frequently ascribed to some strange and unaccountable instinct, depends simply on their every-day perceptions. The rumbling sound strikes their quick ears before it is heard by any one else, and scares them away. In our observation of the dog, we seldom attach sufficient importance to the fineness of his senses. They are so acute that a sleeping dog knows whether he is touched by his master or a stranger, remaining quiet in the first case, and growling in the last.

Whatever opinion may be formed of the sagacity of the dog on particular points, it is impossible to deny that he possesses faculties in addition to those which we ordinarily call instinct. We have no intention at present to plunge into the thorny discussion of the precise extent of his intellectual powers; but we feel assured that no one can follow the dog through the several phases of history, and not acknowledge in the words of Gaston Phœbus, which M. Blaze has taken for his motto, 'That he is the most noble, most reasonable,

and most knowing beast that God ever made.' And, as all his rare endowments have been dedicated to man, there is no animal in creation that has a stronger claim upon our gratitude and love. M. Blaze, whose affectionate earnestness for the welfare of the dog, is the great charm of his book, would extend his care beyond their lives, and erect monuments to their memory. A great poet, whose feelings are always warm and true, has supplied the answer in a tribute to a dog whose death he lamented, and whose 'name' he 'honored:'—

Lie here, without a record of thy worth,
Beneath a covering of the common earth!
It is not from unwillingness to praise,
Or want of love, that here no stone we raise;
More thou deserv'st; but *this* man gives to man,
Brother to brother—*this* is all we can.'

But, if we raise no stone, the epitaph of the dog has been written in many splendid eulogies. M. Blaze has added one more to the number, which we think is not unworthy to stand beside the best:—

'The dog,' he says, 'possesses, incontestibly, all the qualities of a sensible man; and, I grieve to say it, man has not in general the noble qualities of the dog. We make a virtue of gratitude, which is nothing but a duty; this virtue, this duty, are inherent in the dog. We brand ingratitude, and yet all men are ungrateful. It is a vice which commences in the cradle, and grows with our growth; and, together with selfishness, becomes almost always the grand mover of human actions. The dog knows not the word virtue; that which we dignify by this title, and admire as a rare thing—and very rare it is in truth—constitutes his normal state. Where will you find a man always grateful, never ungrateful—always affectionate, never selfish—pushing the abnegation of self to the utmost limits of possibility; without gain, devoted to death, without ambition, rendering every service—in short, forgetful of injuries, and only mindful of benefits received? Seek him not—it would be a useless task: but take the first dog you meet, and from the moment he adopts you for his master, you will find in *him* all these qualities. He will love you without calculation entering into his affections. His greatest happiness will be to be near you; and should you be reduced to beg your bread, not only will he aid you in this difficult trade, but he would not abandon you to follow even a king into his palace. Your friends will quit you in misfortune—your wife, perhaps, will forget her plighted troth; your dog will remain always near you—he will come and die at your feet; or, if you depart before him for the great voyage, he will accompany you to your last abode.'

LANDSCAPE GARDENING IN NEW-ENGLAND.

BY GEO JAQUES, WORCESTER, MASS.

I venture to offer for publication in the Horticulturist a few hints, having a somewhat local bearing upon the subject of landscape gardening.

It is not my purpose to dazzle your eyes with any light of mine, hitherto hidden under a bushel, but rather to provoke your criticism.

The art of embellishing the grounds of a country residence, holds a very high rank. Compared, indeed, with its productions, there is no work of man approaching so nearly a semblance to the creative power of his Maker. Of all earthly pleasures, this claims to be

the most fascinating, while it acknowledges itself capable of becoming the most ruinously expensive.

Although modern writers recognise two grand divisions or styles of this art, the *geometrical* (or ancient) *style*, and the *natural* (or modern) *style;* yet here, as in other fine arts, we find many variations and modifications, or schools of style; as, for instance, where the laws of taste are made to conform to the more stringent code of convenience, economy or utility.

Probably more of this prevails in New-England than elsewhere; for here, more than in other lands, utility has become one of the secular deities of popular worship. In this section of the country, whenever a contest takes place between economical advantage and good taste, the latter is sure to find some apology for making a hasty retreat.

It does not concern us at present to inquire what *may* be done with a ducal revenue of half a million pounds sterling, as at Chatsworth, in England, or with an almost princely fortune upon the shores of the Hudoon. With scarcely an exception, here, in New-England, operations in landscape gardening are, and are likely to be, hemmed in by limits so narrow as almost to exclude the applicability of the term. From a half acre to some seven or eight acres, is the utmost extent of territory that a genuine Yankee, though a millionaire, will consent to appropriate to merely ornamental purposes. Even after having forced himself to acquiesce in such like "wasteful" embellishments, he does all the work grudgingly, counting, (and if a profane man, cursing) the cost, at every step that his labor progresses.

Again, the taste of New-England people generally, for the beautiful and picturesque in rural scenery, is either vitiated, or totally uncultivated. Hence, the great mass of the people prefer symmetry, stiff formality, straight lines, and the geometrical forms of the ancient or artificial style of laying out grounds. Nearly all our first class places in Yankeedom, are so arranged. Another evil arises from a vulgar proneness to an ostentatious display of riches. And as costly architecture strikes the careless eye more forcibly than scenery, the man ennobled by quickly acquired wealth, plants his gorgeous palace upon a bleak and bald site, of which the 'surroundings' would be admirably in keeping for a hovel. The whole strength of the proprietor is spent upon house and furniture. Meanwhile the brassy glare of things provokes criticism, and men find themselves incapable of concealing their disgust at three striking incongruities,—the house itself, the flaunting ignorance of the *animate nature* within it, and the meagre nakedness of the inanimate nature around it.

Some of these places afford a ridiculous exhibiton of the proprietor's insane passion for symmetry. A gate or a tree here, another there; the second obviously designed for no other purpose than to match, or geometrically balance the first. And so of every walk, and of every shrub or flower, throughout the place. Every angle is a stiff right angle; every row is formal and straight; every plant of a row equi-distant, of equal form and equal size. A certain starchy smartness seems to preside over the whole place. Everything is so prim, so square, so sharp, we almost expect to see the house leap from its foundations and fly away. All seems to have for its object a display of the power of art, or rather the superiority of quick-made wealth, to the wisdom which guides the operations of nature. Such, or similar, have ever been the effeorts of the infancy of taste.

Many of our country seats have been planned by the wives and daughters of the proprietors. These estimable ladies, full of that confidence which ignorance inspires, piquing themselves on their exquisite taste in matters of interior decoration, imagine that they are *equally* competent, (perhaps they are!) to guide and direct the embellishment of out-door

scenery. To this source we may trace trees paired off like vases upon a mantel-piece; walks laid out like the entries and passage-ways of a dwelling-house; garden plots with little circles in the middle, suggestive of the idea of a center-table in a drawing room, &c., &c.—all evincing an uncultivated, childish taste, which ever delights in the lowest forms of beauty, preferring whimsical conceits, unmeaning and ridiculous combinations, rather than the infinitely varied, but always graceful manifestations of nature.

In regard to that class of country residences of which the ornamental grounds consist of less than an acre, it is difficult to say much upon paper. Such small places require to be managed with great skill. Into their narrow limits, regular forms will almost force themselves. Lines of walks and trees seem almost to claim to be straight; and it is only by the exercise of patience and skill, that the appearance of art can be concealed. Yet even here, the necessity is not entirely absolute. A refined taste can do much to give an air of natural beauty to a very small residence, particularly where the genius of the place is favorable.

A gracefully curved drive or walk, (from the public street to the buildings,) entering through an irregular group of trees, and forced into its curvature by another little group, will of itself impart to a rural home charms far more pleasing than ten times their cost could infuse into the stiff, old straight-lined primness of the ancient style.

So where a fine cluster of half a dozen elms, oaks, chestnuts, or other beautiful indigenous trees, grow near the sight of the house, the buildings may be located as it were, beneath the protection of these forest guardians, so that the whole place shall at once produce an effect which would otherwise cost the labor of years. Yet few New-England men understand this, and consequently all the beauty of the location falls beneath the axe, and JONATHAN "puts up" his shingle palace in their stead, while Mrs. JONATHAN fixes her admiring gaze upon its bleak and gawky proportions, and exclaims "*My gracious me!*"

Even so small a spot as half an acre, may be made one little snug home scene of rural beauty. Abandoning all ideas of a kitchen-garden, to men occupying such places, generally a thing of no *pecuniary* value, let the entire grounds be filled with groups of ornamental trees, and shrubs, and flowers, upon a ground-work of smooth grass. Let woodbine, honey-suckle and climbing roses, here entwine themselves around a column, and wreath themselves there over a window. Here place a rustic seat, half hid among the shrubbery; there lead a short walk, carelessly curving towards a little vine-clad arbor. How trifling the expense! The cost of a single article of extravagant furniture will defray it. How permanent and beautiful the result! How gratifying, not only to the occupant, but to the passing traveller! And more than that; for whatever tends to cultivate a refined taste, improves the heart, and elevates the better nature of man.

It is for lack of taste, and not on account of a want of room, or deficiency of resources, that we have so little of this in New-England.

Suppose a lot no larger than sixty by a hundred feet. Is it not capable of being made at a most trifling expense, to express features of natural beauty? Certainly; for a bit of green lawn, and one bold group of ornamental trees, will produce this. An eagle's nest on a rocky cliff may be highly picturesque, and yet, together with its surroundings, it costs less, and occupies more limited space, than the smallest habitation of man. A gigantic weeping elm, standing in front of a New-England farm-house, is but a single and not expensive object, while it gives a charm of graceful beauty to the whole place. It is not then, an inexorable law of nature that scenery must be extensive in order that it may be beautiful or picturesque. Taste in designing, skill in executing, are the requisites, and not altogether extent of territory or large pecuniary resources. And yet it is said, "every

man can best lay out his own grounds!" Equally well can every man be his own landscape painter, architect, or even tailor! Surely there can be no better evidence of incompetency than the honest utterance of this assertion!

But if so much can be done within such narrow limits, a great deal more may be expected from those residences where from one to five or six acres are appropriated for that kind of embellishment, to which we not altogether appropriately apply the term landscape gardening.

A man of refinement would in these days, scarcely tolerate a geometrical arrangement of grounds of this extent. Such places admit of a winding carriage-way, leading through a fine lawn studded with groups of trees, irregularly circuitous walks, bordered with various shrubbery; here and there a massive forest tree, standing in its full development singly upon the lawn; a summer-house embowered in the midst of a little retired grove; arabesque forms of flower beds occasionally inserted in the midst of the smooth green of a grass-plot; a vase, pretty even when empty, but better over-flowing with water, which it costs not much to bring in a leaden pipe from some neighboring hill:—such are among the charms which almost seem to make a little paradise of home.

We have far too little of this in New-England, nor can we hope for more until the popular taste shall be educated for it. It may, indeed, be said that such labors are extravagant and useless appropriations of money. Vastly more extravagant is it for a twenty-thousand-dollar man to build a ten thousand dollar house; and yet this thing has become common among us. Suppose such men to build five thousand dollar houses, and to expend three thousand in the surrounding scenery—how immensely different the result! and besides, two thousand dollars would then be left to silence the complaints of extravagance! Neither is landscape gardening a useless art. Its productions feast the eye of every passing traveller; they refine the popular tase, and thereby exert a silent and hitherto unappreciated influence upon the morals of society. They constitute a no mean portion of a nation's pride at home, and of her renown abroad.

We have arrived at the end of our sheet, and have just room left to express our earnest hope to hear more from youself or others, upon this prolific and very interesting subject.

GEO. JAQUES.

Worcester, Mass., Nov. 1851.

REMARKS.—Our correspondent is severe upon New-England taste, and he is partly just and partly unjust. Partly just, because no where does one see so many snug houses belonging to persons of moderate means, the proportions of which are so faulty, and the accessories so rigidly wanting in grace, as in many parts of that portion of the Union; partly unjust, because the country villages of New-England, with their beautiful avenues of elms, and their republican air of rural order and adornment, afford evidences of taste far above that of the rural towns of the rest of the country.

We suspect the truth is, that the majority of the New-Englanders have given the subject less thought than in any part of the country. Whatever the New-Englander bestows thought upon, grows into new life under his hand. But there are much fewer examples of good taste in gardening and architecture, set by men of large wealth in New-England, (if we except the environs of Boston,) than in New-York or Pennsylvania, while there are more houses built, and places laid out by working-men of small means there, than in any other part of the country. If we could establish a school in every considerable town in New-England, next year, where *drawing* should be taught to artisans and mechanics—we would undertake to promise that the whole taste of the country should be revolutionised in ten years. The building of all the cottages of New-England is, at the present time, al-

most solely in the hands of carpenters, nine-tenths of whom can neither draw, nor understand a drawing. When, therefore, a person presents a country carpenter in New-England with a design for a cheap cottage, of a form superior to, or different from, the stereotyped *bastard pediment* style, so common all over New-England, the latter immediately says,—"Oh! that is a very *dear* style of cottage. But I will build you one like deacon C.'s, which is ten feet larger each way, for $200 less." This, of course, decides the proprietor of moderate means, who is ignorant of the true state of the case, to build in the bastard pediment style. The truth is, the carpenter has the latter by heart, and knows to a dollar what he can do the job for. The other he has only a vague idea of—and would lose money on, from experimental blunders of all kinds—though not a farthing dearer in itself. Knowing this fact by heart, (by constant contact with it,) and knowing also, how superior to any other mechanic a Yankee carpenter is, whose thinking and working faculties have been educated—we long for the time when the common schools of New-England shall do something more than common. If they would only teach drawing, taste would just as sure follow, as spelling follows the alphabet. It is impossible for man or woman, however well he may *think*, to express his ideas on paper, (or in houses and grounds,) in anything better than hard lines and "pothooks," till he has learned how to make the mental and the material correspond.

ON THE WOOD-PRODUCING FORCE AND THE SEED-BEARING FORCE, IN VEGETABLE LIFE.

BY L. YOUNG, SPRINGDALE, KY

According to the received doctrines in Botany, in the case of exogens, a wood or leaf bud in development, forms an axis or branch with its appropriate leaves, arranged in an order peculiar to each genus; each leaf, in its foot stalk, being furnished with an inner and an outer set of ducts and vessels, which vessels, in the course of a growing season descend by extension to the roots; the inner set upon the smooth, cylindrical surface of the alburnum; the outer, (if Lindley's notions of the proper office of cambium be true,) upon the inner surface of the bark; the annual deposit of wood and bark lying between these inner and outer ducts and vessels. In time, during the season's growth, anastomosis takes place in the axilla of every such leaf; a new wood bud is formed and installed upon the apex of the bundle of vessels, woody fibre and bark, which, originating in the foot stalk as before stated, has already descended by extension to the roots.

In this way, every wood bud is in a state of direct communication with the roots, ready by vitality and capillarity, to pump up supplies of food for the formation of still other leaves and branches—destined in their turn, still farther to increase the vigor and size of the trunk and roots. A fruit bud is a metamorphosis of one of these wood buds; "it is a wood bud excited into growth; but which, in growing, elongates neither upward nor downward." It is obvious then, that being seated in connection with vessels extending to their roots, the fruit bud pumps for itself food from the general circulation, but not extending downwards in growth, it has no chance by which to send succor and strength to the stem and roots. The fruit bud is, therefore, a sort of parasitical plant, living at the expense of the wood system, and as it is generally expressed, in a state of "antagonism with it." To the practical cultivator, it is a matter of secondary interest whether this metamorphosis result from some innate power peculiar to the life of plants, as the learned

Dr. LINDLEY supposes—or is brought about by some outward circean agency everywhere present, and ready to act, under proper conditions, as the luminous ray of the compound sunbeam, which is the theory of a certain French philosopher.

But the propositions themselves, being admitted to be true, there are certain hints which may be drawn from them as corollaries, and which will prove instructive in a high degree, to the farmer, pomologist and gardener. Two of them I propose to consider briefly in the present article.

1st. That in exogens, which include most fruit trees, the normal place of the fruit bud is within the circuit of circulation, and that generally, its appearance at the extremities of leading branches, is an evidence of over-fruitfulness and disability, if not disease.

2d. That as from organization, the fruit spur system is supported out of the general circulation, upon the principle of parasites, and maintains what is termed "the *balance of power*," by absorbing just so much of the general circulation as prevents over-luxuriant growth in the wood system—no more and no less: too great a diminution of the wood spurs has a tendency to over-stimulate the wood growth.

If we attempt to look around for evidences of the injury which trees and plants sustain, where fruit buds are allowed to take possession of the extremities of the main wood branches, and to cover the whole outer surface, we can hardly go astray, whether in the orchard or garden, especially when the plantations have been of long standing. Do we see the bearing branches of the gooseberry or currant bristling with thick and pointed clusters of fruit buds to their very ends? If so, it may be set down as a truth, that such branches are destined to perish at a day not remote. If again, we examine the pear and the apple, and find the whole exterior surface of the trees covered with fruit buds and fruit spurs, such a state of things is evidence of present debility, or a most pregnant sign of its speedy approach; indeed whole families of fruit trees (heavy bearers generally,) are sometimes seen to blight in this way—the wood system being stifled and supplanted by these parasitic spurs, and only re-appearing amid the dying throes of the tree, under the shape of "water-sprouts," in the body and large branches of the tree, where they break out in clusters, not unlike those present in the peach tree when affected with "yellows."

If one were skeptical of the doctrine of botanists, that fruit buds add nothing to the wood system, it would be quite easy to remove such doubting by a little personal examination of trees upon which the fruit bud system is developed in great excess. Numberless examples might be found of branches not larger than rye-straws, terminated by fruit buds, showing unerringly an age of three or more years, while such branches themselves show no increment of wood over and above the annual ring of the first season's growth; in fact, in such cases, the order of nature seems inverted, and instead of that taper growth from the trunk upward and outward, which marks and makes beautiful a tree in health, those fruit spurs go on enlarging and multiplying, until the thickening and bloated masses of debility darken and almost obstruct the view.

In illustration of the second point proposed, I shall draw largely upon individual experience, and hope that I may state, without being thought presumptuous, that my fruit crops, for some years, have presented a uniformity of appearance which has led some persons, and especially the less experienced, to suppose the result ascribable to the possession on my part, of some secret in the art of cultivation. I hardly need say that such is not the fact, and that I have never based a hope upon any other foundation than good culture, aided by a practice in pruning and training, conducted in accordance with the natural habit of each genus. But in efforts to acquire a knowledge of these natural habits, (which knowledge constitutes in part the science of pomology,) I have, after having endeavored to avail my-

self of all the light shed upon this subject by others, sometimes perpetrated egregious errors, and perhaps I never committed an error more egregious in character, or more expensive in its consequences, than one in relation to the nature of this very fruit bud system, or spermoganous force. I term this error expensive, because in adopting a practice of pruning the peach and pear in conformity thereto, I lost a large part of the general crop in several bearing years, *for the want of bloom.*

Anterior to about the period 1847, I was, when growing fine fruits, in the habit of thinning the crop by removing a large portion of the fruit spurs with the fruit attached, leaving only those bearing the specimens intended to be ripened, and with the peach particularly, by way of *monsterizing* individual fruits, I reduced the whole count to a very small number upon certain young trees, nor was this practice abandoned till I saw branches of bearing trees, thus treated, running up into a nursery growth, the "tout ensemble" of which branches resembled more a thicket of young trees than a well proportioned individual tree. Indeed I have been more than once mortified to see fruits treated thus, and from which so much was expected, come to a perfect stand still; the whole crop of certain individual trees, ultimately writhing, growing yellow and dropping without maturity, whilst the buds of the current season would swell and burst into active wood growth.

These fruit spurs being in the nature of parasites, possessing and enjoying supplies of food obtained at the expense of the wood system, exist in a state of antagonism therewith, and holding forcible possession of the power to feed upon the general circulation, they must exist in such numbers, collectively, as will enable them, as a system, to keep in check the wood-growing force, the constant tendency of which is to a monopoly of the whole circulation, and to a growth of over luxuriance. Although it is a maxim generally received as a truth, that in sharing out any given stock of supplies, the fewer the distributees the greater the distributive share. The functions performed by the fruit-buds collectively as a system in this case, qualified the applicability of this maxim. When I thinned the crop by removing the spurs up to a given point, the operation might be salutary; further diminution disturbed the balance of power, and diminution carried to extremes stimulated the wood growth to a luxuriance which for a time suspended the development of fruit buds of a healthy character.

Although my remarks concerning the nature of these two forces have been confined to exogens, it by no means follows that a knowledge of them in other families of plants is either unattainable or useless. Such knowledge is not unattainable, since among cereals any experienced farmer will in early spring, long before the wheat plant has shot into culm, and as far off as the eye can discern colors, pronounce upon the promise of any wheatfield for a crop abounding more or less in straw or grain, as the dark green of luxuriance or the more subdued tints of moderate vigor happen to prevail; nor is it useless, since thereby a definite object is set before us and we have only to seek for means suitable to accomplish it—and it is somewhat remarkable as well as gratifying to the advocates of book-farming to notice the harmony in principle which prevails in the prescription of Loudon, the highest English Agricultural authority, for converting an over-luxuriant wheatfield into productiveness, and that of Monsieur Cappe, French Pomological authority quite as high, for changing an over luxuriant wood branch into fruitfulness—the one would rob the plants of their blades in April by "*cutting them off with sheep or even horses;*" the other would "pinch early the soft extremities of the shoots on vigorous parts."

I have thought too that Mr. Downing's strawberry problem would admit of solution on this principle. Many varieties tending, in a rich light soil, to that obesity of luxuriance

which is imbecility, are kept in moderate vigor by compelling the roots to labor for a living amid pounded soil, which is to them the being pastured on "short commons."

L. YOUNG.

Springdale, Ky., 1851.

Reviews.

HEAT AND VENTILATION; *general observations on the Atmosphere and its Abuses, as connected with the common or popular mode of heating public and private buildings, together with practical suggestions for the best mode of warming and ventilating.* Rochester, D. M. DEWEY, Arcade Hall.

BELIEVING, as we do, that *the intemperance of breathing bad air*, is a national curse in America, which is, at the present moment, hurrying a thousand-fold more victims annually to the grave, than any other species of intemperance, we hail with pleasure any symptoms of awakening attention to the condition in which so many millions of our countrymen voluntarily pass so large a part of their lives.

The work whose title we have just named, is an unpretending pamphlet of 59 pages, published by D. M. DEWEY, at Rochester. It is mainly occupied with a very simple and clear statement of the necessity to the health of the human system, of pure air, and some system of ventilation in our dwelling houses. The wholesale system of poisoning men, women and children, daily going on all over the country, by tight coal stoves, and wherever one travels in cars and steamboats, by little "salamanders" of red-hot iron, and wherever one goes to a crowded lecture room or place of public amusement, by the continual heating over of the poisonous carbonic acid gas expired from the lungs—these are the topics which the author of this pamphlet, like ourselves, and others who have handled this subject, dwells upon, with wonder that intelligent beings can overlook their importance. If there is any "infernal machine" in America, it is *a close stove that becomes red hot.* We have preached from this text—(and we believe not without some effect, since we notice a stove-maker in Ohio advertises a ventilating stove, expressly intended to obviate the objections we have urged,) and we hope the press everywhere will take up the crusade, until this cursed invention to poison the pure air of heaven is utterly banished from the land. We shall quote for the benefit of our readers, what the author of this pamphlet has to say about the matter:

'But when we reflect upon the fact, that throughout the whole country, as soon as fuel becomes a little scarce, the open fire place in any and every form, is pretty generally closed to give place to the stove; we meet an evil which has been growing upon us for the last quarter of a century to an alarming extent. It is, however, true that in large towns, particularly where coal is easily obtained, the open grate in the best class of houses is quite generally used. The business of stove-making in most of the large towns in this State and throughout the country, has become quite the leading branch of manufacturing. Any one who will take the trouble to visit such establishments in Albany, Troy, Utica, Syracuse, Seneca Falls, Rochester, Lockport, and Buffalo, will, if unacquainted with the business, be astonished by the number which are annually turned out from these various establishments. The infinite variety, the taste and skill displayed not only in their external appearance, but in their fuel-saving qualities, demonstrate that the demand must be almost unlimited. The venerable Dr. NOTT, of Union College, and Prof. OLMSTEAD, of New-Haven, and many other intelligent gentlemen, have devoted a great deal of time, labor, and practical philosophy to the invention of stoves which would give off the greatest

amount of radiant heat with the least quantity of fuel. In this they have been very successful, and, if *warming* a room in this form, were all that its inmates required, mankind would be under lasting obligations for the philanthropic efforts of these distinguished scholars. From the tenacity with which they have adhered to their several models, one would suppose they were entirely unconscious of the consequences of introducing such a fuel-saving apparatus into a close room without any means of ventilation. Although the Germans, Russians, and French formerly excelled us in their construction of stoves, we are probably quite equal to them at the present day. The poorer classes in Germany and Russia, probably make their houses much closer than ours, and exceed our people in saving all the heat generated. In Russia, the great mass of the population exclude the external air in cold weather as far as possible, and they much prefer to respire the vitiated air to any admission of cold air, for the simple purpose of improving the atmosphere of their rooms.

"Among the poorer classes, fainting or asphyxia is, by no means, uncommon, and all their rooms have that close, unhealthy smell which is so common among those who live in underground cellars in our own large towns and cities. With such an atmosphere as this and common as it is among the Russians, we need not wonder that Cholera remains among them during during winter, while in cold weather in other countries it ceases. Although many of the most scientific men of the present day—several of whom are of the medical profession—have depicted in the strongest language, the injurious and oftentimes fatal consequences of this mode of heating buildings; still very little attention is given to their warnings. Within the last two or three years, many of the most distinguished writers of the age have written volume after volume, upon the necessity and feasibility of ventilating our dwellings. The great mass even of intelligent and educated persons seem to be unaware of the disease, pestilence, and death, so often resulting from the use of what is called the "tight air-stove;" and the manufacturers of the article are making as many preparations for the continuance of the demand as though their wholesome qualities were as well established as the elegance of their various designs and patterns. It is a very common thing for persons who are abundantly able to secure all the comforts of life even in profusion, and construct a dwelling-house in strict accordance with all the modern improvements in domestic architecture, to leave out entirely the fire-place, and in its stead have a small circular opening, six inches in diameter, to be closed perfectly tight during summer, and opened only in winter; to receive the smoke-pipe of a fuel-saving salamander, which shall admit no more air than is barely sufficient to support the combustion of the fuel. He will avail himself of the skill of the architect, to make all his windows and doors perfectly tight, and as the cold weather approaches, he will oftentimes invite his neighbors in to spend the evening socially, and at the same time demonstrate by the small amount of fuel which he uses, that he has the best stove and the warmest dwelling in town. Indeed, the whole company will soon testify to the fact that the room is really warm—so warm that they are inclined to leave early in the evening, and if the same persons should frequently visit similar establishments, they would soon come to the conclusion, that going out on evening visits is very unwholesome—a species of dissipation which ought to be abandoned. The owner of such an establishment, as the one alluded to, is generally far from being parsimonious, and very likely fond of giving sumptuous entertainments, and in all his intercourse with his family and society may manifest the most generous feelings, and show his liberality in a thousand acts of kindness and benevolence; but did he know the consequences upon himself, family, and friends of his heating apparatus, its fuel-saving qualities would have very little influence upon him. We are fully aware that to those

who are very poor, and find it hard in cold cimates to secure fuel enough to keep themselves warm—the tight air-stove is perhaps the best thing for them under such circumstances, which can be introduced into their humble abode. But in such rooms as they are generally obliged to occupy, they suffer much less for the want of ventilation than those who live in houses where all the windows and doors are so nicely fitted, that the external air is entirely excluded. In many of the coal-stoves which have lately been introduced, the coal burns so slowly, that the carbonic acid gas, which is generated (being half as heavy again as the atmospheric air,) cannot ascend through the smoke-pipe and chimney-flue with the temperature which is generally maintained a few feet from the point of combustion. Dr. Ure, one of the most scientific writers of the day, says that "carbonic acid gas cannot ascend at the temperature of 250 deg. F." but regurgitates into the apartment through every pore of the stove, and poisons the atmosphere. "I have," says he, "recently performed some careful experiments upon this subject," and find that when the fuel is burning so slowly in the stove as not to heat the iron-surface above the 250th or 300th degree of Fahr., there is a constant deflux of carbonic acid gas from the ash-pit into the room. "I shall, (he says,) "be happy to afford occular demonstration of this fact to any incredulous votary of the pseudo-economical, anti-ventilating stoves now so much in vogue. There is no mode in which the health and life of a person can be placed in more insidious jeopardy than by sitting in a room with its chimney closed up with such a choke-damp—vomiting stove."

"We could quote language and facts of a similar character from a great variety of the most reliable authors, but if we can induce any of our readers to observe the consequence in their own dwelling of these modern machines, we shall have gained more than by simply inducing them to peruse these opinions, however reliable they may be. In most of our churches, public halls, school-houses, court-rooms, places of public amusement, offices, stores, work-shops, &c., we meet in this section of the country, the same unwholesome atmosphere; and almost the only variety to be observed in the mode of heating the room is in the *form* of the stove. If you enter a public hotel, the first thing you meet in the office or bar-room (if in winter,) is a large box-stove. If you go to the dining-room, you meet the same thing again, with perhaps a hundred feet of smoke-pipe crossing the room at different points; and the offensive character of the atmosphere gives you a sense of fullness in the head, while perhaps a disposition to vertigo compels you to leave the public rooms and retire to the one allotted to you. Then you will probably find a neat little elegant gothic pattern red-hot by way of showing you a little variety, and if you are compelled to lower a window for your relief, and wake up at midnight with a severe cold, you may console yourself with the fact, that your beautiful little stove is of the latest and most approved fashion, and consumes less fuel than any one ever before invented. If you stop long in the place, and stay over the Sabbath, and have been properly educated, you will of course go to church, and it is your own fault if you do not find one of beautiful proportions, handsomely finished, and elegantly decorated. The stove will be larger than the one at your hotel, and one will be placed in each corner of this splendid edifice. The sexton will fire up as often as is necessary, and keep you perfectly warm. It is true the air may soon become very disagreeable, and the eloquent voice of the speaker sound dry and husky; if he cannot relieve it by moistening his vocal organs quite frequently with cold water, you may not be at all pleased with its tones, silvery and agreeable as they were at first. But do not blame him. He is suffering for the purpose of keeping the audience *perfectly warm*, and if you see a considerable proportion of the congregation asleep, particularly if the house is *full*, do not wonder at it, for the atmosphere

has been so thoroughly dried and respired that there is not oxygen enough remaining to give them the ability of keeping awake. If now and then a delicate lady near you faints away, help her out as quick as possible into the fresh air. You need not send for a pitcher of fresh wáter to throw in her face. The pure unadulterated atmosphere is abundantly sufficient to restore the circulation, though she may suffer some time afterwards. This kind act being performed, you can return again to the church much invigorated. If after this experience you come to the conclusion that all these difficulties are caused by the use of a close stove, you need not mention it to others, for they have heard of it before. If your own house is warmed and ventilated according to modern notions, you may perhaps congratulate yourself in leaving the town. In the railroad cars, you expect to get into a different atmosphere, but as soon as you enter, you will only find a different pattern of stove made *exsressly for railroads*. The passengers may insist that every window shall be kept closed, and you have no alternative but to remain a victim to the foul pent up air which is so common under such circumstances, until you reach the end of your journey.

"We have spoken thus freely of the use of the common box and tight-air stove, and did we not know from experience and observation, and were we not supported by the highest medical authority, and most unequivocal chemical tests, that the evils resulting from their general use far exceed any and all of our allusions, we should hesitate as to the propriety of attacking a system which is so universally adopted. We know that many persons have their houses so constructed, that it is difficult for them to make any change in this department of their domestic arrangements. But if we shall be successful in inducing those who have seen and felt the evil effects of heating their houses, without any reference to ventilation or the quality of the atmosphere they inhale at every breath, they will be the better prepared to appreciate the improvements which have lately been introduced. In some parts of the country, several attempts have been made to introduce a kind of stove which will warm a current of fresh air directly introduced from the outside. It is impossible to ventilate a room by drawing off the foul air without introducing a corresponding amount into the room from some source. If cold air be introduced for the purpose of ventilation, all the warmed air will pass off through the ventiduct, and the cold air remain. We need hardly say that, under such circumstances, it is impossible to make a room comfortable. To overcome this difficulty, a ventilating stove has lately been introduced in different parts of Europe and in some of the eastern towns of this country."

The pamphlet is filled with suggestions and explanations relating to the best mode of ventilating and warming, much of which we have published in the "Country Houses"—but which we trust will meet a wider circulation in this form. If a million of copies could be circulated in the United States, it would be an immense and incredible saving of health to the people at large.

Bad air is a "slow poison." That is the trouble. People go on taking it into their lungs day after day, and night after night. They grow pale, their lungs suffer, the circulation is languid, they take colds readily; the chest, the stomach, the skin, become disordered, and a host of chronic diseases attack them. A little carbonic acid taken every day don't kill a man. It is almost a pity it did not! If a red-hot stove destroyed, instantly, one man in every town daily, for a week, there might be some salvation for the nation. If instead of fainting away in crowded and badly ventilated public assemblies, people occasionally died outright in convulsions, the authorities would take the matter in hand, and make it penal for the owners of such buildings to open them for public use without attending to the proper conditions for the preservation of health. When a thing is only a "*slow* poison," the age is too much in a hurry to attend to it.

In such cases we must wake up the public lethargy by facts. And here is one of them. We have before us the History of the Dublin Lying-in Hospital. Some years ago, this building, erected in the common way, without the slightest regard to ventilation, was found to exhibit a great amount of mortality among the young children born there. In four successive years—healthy seasons too—out of 7,650 infants brought forth in the hospital, 2,244 died within the first fortnight after birth, of convulsions, or what the nurses call nine-days fits. These children foamed at the mouth; the jaws became firmly closed; the face swelled and assumed a purplish hue, as though they were choking. "This last circumstance suggested to the physician that a deficiency of wholesome air was connected with the great mortality." Air pipes were immediately contrived; the various rooms were well ventilated. What was the result? That in the three following years, out of 4,243 children born in that hospital, only 165 died. In the very same rooms, too, where, according to the old ratio, before the ventilation took place, the number of deaths to that number of children, would have been 1,632. To save the lives of more than 1,400 human beings in three years, by merely putting in a few pipes! Can any one say there is nothing in ventilation, after such facts as these?

Foreign and Miscellaneous Notices.

Foreign Garden Gleanings.—(St. Petersburgh.—Florists.—Among the different florists of St. Petersburgh, M. Alwarch, a German, stands first. He cultivates nothing but those plants which are universally sought after in Russia, viz: good evergreen shrubs and bushes. These plants, which are brought into Russia in pots, are sold in large quantities to the nobility, who, in winter, and the commencement of the fine season, use them for the internal decoration of their houses. We may mention more especially Gardenia florida; Ixora coccinea and others; Lantana; Musa; Æschynanthus; Asclepias curassivica and Hoya carnosa; Echinum; Gesnera; all of which are cheaper in St. Petersburgh than in Paris. Such is not the case with the hundred-leaved, crested, four-seasons, and Belladonna Roses, which, when in flower, fetch 2s. 6d. and 5s. The Myrtle-leaved and Chinese Orange trees are also very dear, as are also Pelargoniums and Fuchsias. Franciscea odorata, and Hopeana, are great favorites; Begonias and Gloxinias cost half as much again as they do in France. Camellias and North American Azaleas fetch most extravagant prices. The same gentleman has a large collection of Rhododerdron ponticum maximum, and other species; but we look in vain for out-door Azaleas, Calceolarias, from Chili, or Cacti from Tropical America. As for Myrtles, Pomegranates, Laurels, Jasmines, climbing Roses, Dahlias, Pinks, and Spanish Jasmines, they are rare and costly.

Besides evergreen shrubs, M. Alwarch cultivates, though upon a smaller scale, out-door shrubs. We principally noticed some bushy plants, capable of resisting the severe frosts of the country, such as Cornus mascula, alba and sanguinea; Elders; Spiræa lævigata, rosea, and ulmifolia; common Lilacs; Chamæ cerasus, Snowdrops, Snowberries, Service trees, Sweet Chestnuts, Pteleas, Poplars, especially the true sweet-scented suaveolens; Caragana, with which beautiful undulating hedges are made; the charming red-fruited Acer tataricum; Buckthorns, and particularly the one from Tartary, which constitutes a large part of the live hedges in the country; lastly, Cratægus purpurea, with its handsome foliage, far surpassing in color that of Cr. alba. The latter plant attracted my especial attention; its beauty, the rapidity of its growth, and other excellent qualities, enable the Russians to make live hedges, which we should very much like to see introduced into our own country.

Flower Markets.—One of the first things which strikes a stranger entering St. Petersburgh, is the evident passion which all the inhabitants, rich and poor, old and young, have for flowers.

The eye admires, with surprise and delight, the halls and rooms of all classes, which, for eight or nine months in the year, are more like conservatories than the interior of common dwelling-houses; being gay with plants of every clime, whilst out of doors the country is desolated by the severity of the cold. In-doors we find Palms and Figs, Musas, Dracænas, Marantas, the large leaved Arums, Camellias, Rhododendrons and Azaleas; also some beautiful Leguminosæ, Mimosas, Cytisus in pots, Myrtles of all sorts, Olea fragrans, the large Clethra, different sorts of Laurel; and lastly, but most conspicuous, are the hundred-leaved and four-

season Roses, Hyacinths, and other flowering plants.

The working classes, who cannot command a wide range of temperature, prefer such plants as Crinum, Maranta, Hoya carnosa, Asclepias curassavica, and Lantana; Oranges, Jasmines, Plumbago capensis, Ixora, Laurel, Cytisus and Olea fragrans.

The poor, who are compelled to live continually in the town, grow Pelargoniums, Roses, Verbenas, Fuchsias, Wallflowers; and, in spring, Lilies of the Valley.

Flower Trade in St. Petersburgh.—A fair, which is held as soon as the frosts are over, and which lasts a whole month, viz: from the 25th of May, to the 25th of June, is almost exclusively a flower fair; it is at this fair that the nobility and country gentlemen make their purchases for decorating their country houses, to which they are about to retreat. The flowers are supplied almost entirely from Germany. We remarked the hundred-leaved and four-seasons Rose, planted in a sort of hamper; Cherry, Apple, Plum, Service, and Sweet Chestnut trees, a few Pear trees, all shrubs, and selling for double what they do in Paris; the Lilies of the Valley, especially, seemed to bear a most exorbitant price. We saw, too, Pæonies, and all sorts of perennial and shrub-like plants.

Flowers are sold, too, by travellers, who go from house to house, carrying upon their heads boards upon which the flowers in pots are closely packed. But these pedlars offer their purchasers neither variety nor beauty, a few Wallflowers, Pelargoniums, Fuchsias, Lilies, Echium, Gesneras, Roses, Mignonette, Cinerarias, Verbenas, Phlox, and Justicia, form the whole of their collection.

Although there are many more florists in St. Petersburgh than in Paris, the collections of the former are much more meagre than those of the latter. Their trade in bouquets, and flowers in pots, is prodigious, far surpassing what we had imagined.—*Masson's Report*.

Quercus agrifolia, a hardy evergreen Oak from California.—A few miserable living plants of this species were sent home by Hartweg from California, and are now beginning to grow in the Society's Garden. It will probably be a hardy evergreen tree, concerning which Nuttall, who knew it in its native country, has the following remarks:—"This species, almost the only one which attains the magnitude of a tree in Upper California, is abundantly dispersed over the plain on which St. Barbara is situated, and, being evergreen, forms a conspicuous and predominant feature in the vegetation of this remote and singular part of the western world. It appears more sparingly around Monterey, and scarcely extends on the north as far as the line of the Oregon territory. It attains the height of about 40 or 50 feet, with a diameter rarely exceeding 18 inches; the bark is nearly as rough as in the Red Oak. The wood, hard and brittle and reddish, is used only for purposes of fuel, or the coarse construction of log-cabins. As an ornamental tree for the south of Europe or the warmer States of the Union, we may recommend this species. It forms a roundish summit, and spreads but little till it attains a considerable age. As a hedge it would form a very close shelter, and the leaves, evergreen and nearly as prickly as a Holly, would render it almost impervious to most animals. The leaves vary from roundish ovate to elliptic, and are of a thick rigid consistence; the serratures are quite sharp; the young shoots are covered more or less with stellate hairs, and for some time tufts of this kind of down remain on the under side of the midrib of the leaves, which are, however, at length perfectly smooth, and of a dark-green above, often tinged with brownish yellow beneath. The staminiferous flowers are very abundant, and rather conspicuous; the racemes the length of three or four inches; the flowers with a conspicuous calyx and eight or ten stamens; the female or fruit-bearing flowers are usually in pairs in the axils, or juncture of the leaf with the stem, and sessile, or without stalks. The cup of the acorn is hemispherical, and furnished with loose brownish scales; the acorn, much longer than the cup, is ovate and pointed. We do not recollect to have seen this tree properly associated with any other, except occasionally the Platanus racemosa; their shade is hostile to almost every kind of under-growth. By Persoon this species is said to have been found on the eastern coast of North America, while Pursh attributes it to the north-west coast, about Nootka Sound. It does not, however, extend even to the territory of Oregon, as far as my observation goes." Nee says, "I have only seen branches collected at Monterey and Nootka. The leaves of the young plants are perfectly smooth when first developed, of a thin consistence, with numerous sharp dentures beneath; they are of a brownish yellow color, and appear smooth and shining." The long narrow acorns, almost conical, are a remarkable feature in the species. *Journal of the Horticultural Society*, vol. vi., p. 157.

Artifical Breeding of Fish.—As the amusement of fly-fishing is one which holds a first place in the opinion of every one who understands it; and as the trout and the salmon are the only fish which afford genuine sport to the angler; and as I believe that the latter, in the southern counties of England, is nearly extinct, whilst the former is there far from being abundant; I wish to call the attention of such of your readers as are possessed by the true piscatorial *furor*, to the facility with which these fish can be bred artificially; and as many experiments have been made by my directions, and I have witnessed the results, I beg to say that there is no fear of success, if due care is taken. The experiments of Sharr, Agassiz, &c., have proved that fish can be bred artificially (the experiments of Boccius I have not yet

tried, although he professes to arrive at the same results in another manner); and acting on the plan recommended by them, I have known both trout and salmon bred by thousands for the last 10 years; and as now is the time for the experiments to be made, I hope that those who intend to try the plan will lose no time in looking after their supply of breeding fish.

To begin with trout: catch as many as you can conveniently obtain upon the spawing beds* and examine them carefully one by one, to see that the spawn and milt are in a fit state for exclusion, and also to enable you to separate the males from the females. If they are in a fit state to be operated upon, which may be known by the facility with which the milt and the roe run from them, on a slight pressure, squeeze the milt of the males into a little water. When you have obtained all the milt you can get, add so much water that the mixture remains slightly opalescent; say about equal in color to a table-spoonful of milk mixed in a quart of water. Pour this into a deep dish or bowl, large enough to hold the largest of your female trouts. Take one of these, put it into the water so prepared, and gently squeeze the roe from it, whilst overhead in the water.† Do this as quickly as possible and return the fish into fresh water, and then pour off the water containing the impregnated roe, through a strainer, carefully preserving it for the remaining fish, and immediately return the roe into fresh spring or brook water. Repeat the operation for every female trout, and you will then have a quantity of impregnated roe, which, if properly managed, will hatch with great certainty. Have ready as many boxes as you are able to stock with spawn, made 3 feet long, 2 feet broad, and 6 inches deep; fill them two inches deep with river sand, so well washed that there is not a particle of mud left in it, and upon that put two inches of gravel, also exceedingly well washed, and varying in size from a hazel nut to a pigeon's or pullet's egg. These boxes must be so placed that the water from a spring will run into the first, and from the surface of that into the second, &c.; and below the whole nest of boxes, there ought to be a small reservoir made, say three yards by two ditto, and 18 inches deep, and well gravelled at the bottom; all these things having been previously arranged, and the water flowing nicely over the gravel, sprinkle the impregnated roe equally over the surface of the gravel, say a quarter of a pint to each box, and it will roll down the interstices of the gravel, and find a bed in which it will remain snugly until the spring, then, about March, if all has been properly managed, you will find, on a careful examination, that the young trouts are coming to life by hundreds.

I am very particular in recommending a spring, rather than a brook, for several reasons; in the first place, brooks are liable to be flooded, and are sometimes so overcharged with sand, mud, &c., that the gravel in the spawning boxes is completely choked with it, and the spawn is lost, as I know to my great and frequent disappointment; at other times all is washed away together. In the second place, the gravel of brooks swarms with water-lice, and the larvæ of aquatic flies, as well as bullheads and loaches, all of which prey upon the spawn of both the trout and the salmon; and in the third place, if you place your spawning-boxes in a brook, it is difficult to prevent the escape of the fry when hatched, and you are left in doubt as to the success of your experiment; with a spring all these inconveniences are obviated, but if your water-course should contain water-lice or aquatic larvæ, it is a very easy matter to destroy them before putting in your boxes, with a little quicklime. It is also desirable to cover your spawning boxes with a wire grating, and also to protect them in severe weather from the chance of being frozen. When they begin to hatch, open a communication between the boxes and the little reservoir below, and if this communicates with a water course, in which aquatic plants are growing, so much the better; the fry as soon as they are strong enough, will make their way into this ditch, and will find an abundance of food among the water plants; from thence they ought to be able to make their way into the brook, river or lake, which it is intended to store with them; but all ducks, wild and tame, should be driven from this ditch, or there will be few trouts allowed to find their final place of destination.

The above rules, with some modifications, are applicable to the breeding of salmon as well as trout, the only difference being in the mode of placing the female fish. The salmon is too large a fish to put into the vessel in which the diluted milt is placed; but I think it desirable that she should be held by an assistant in such a manner that the tail and lower part of the body, up to the vent, are immersed in the water containing the milt; it is also very necessary to hold her firmly, otherwise a large fish, in the struggles it makes to get free, is apt to upset the vessel containing the milt, and then the experiment is at an end; at least for a time; being held firmly by the assistant as above, the belly of the fish must be gently pressed by the hands, to promote the emission of the spawn, which on emission must be gently stirred in the water, to bring every grain of it into contact with the milt; but do not allow it to remain longer in that liquor than a minute, as I have found that if the diluted milt is too strong, or if the ova

* I have frequently found, when catching trout for this purpose, that the milt and roe were not ready for emission. When this was the case, I enclosed the fish in a wire cage, which I immersed in water, examining them every week, until I found they were ready for the experiment.

† I fancy that if the ova come in contact with the air on emission, that they are not so readily impregnated as if they are kept covered with the water until the impregnation has taken place, and therefore I wish to lay some stress on the desirableness of thus keeping the air excluded. The milt remains in an active state long after emission, but I have great reason to suppose that this is by no means the case with the roe.

remain too long in contact with it, they become opaque and never hatch at all, apparently because they are over impregnated. In the ordinary way in which salmon and trout are bred, the milt must be largely diluted with water, and the contact between the milt and the ova can only be momentary; for the streams in which these fish spawn (particularly salmon) are so rapid that the milt on exclusion must be carried away immediately.

I am quite aware that there is another theory which assumes that impregnation takes place 12 months before emission; but a very careful examination of the spawnings of minnows and lampreys (I have never been able closely to examine the spawning of the salmon,) convinces me that it is not a correct one; besides, did any one ever succeed in hatching the ova of fish which had not been allowed to come into contact with milt after exclusion; if they have, when—where—and how was it accomplished, and where is it recorded?* I know that I could never succeed, although I have often tried the experiment; on the other hand, it is the easiest thing imaginable, with due care and a suitable situation, to hatch those that have been properly impregnated after emission. But if I admit, to avoid argument, that this theory is correct, it will not interfere at all with the artificial breeding of trout and salmon; on the contrary it would materially facilitate it. It would only be necessary to catch a female fish, with the ova ready for emission, and place these ova in clean gravel, in a box, as before described; but there would be no occasion for males. T. G. *Gard. Chron.*

Blanching Celery.—This year I adopted the following plan with my Celery, which has answered extremely well. I planted it in a trench and left it to grow to its proper height; I then drew each plant through a circular drain tile, and stopped the top of the tiles with moss, and leveled the ground; in less than three weeks afterwards they were beautifully bleached, quite clean, and came in earlier than in the old way. The drain tiles are very inexpensive, and they do not harbor slugs, &c.—*H. M.—Ib.*

Horticultural Exhibition at Paris.—I went to the show of the Societie Nationale d' Horticulture de la Seine, on Saturdy, the 27th of September. It was held in a very large tent, pitched over one of the fountains in the Champs Elysees. I observed several, (what I thought) improvements in the way of conducting this fete. It lasted four days; my visit was on the second day, when certainly everything was fresh, and by the crowds I saw entering on the third day, it appeared not to have lost any of its attractions. Not only were fruit and flowers exhibited, but also vegetables, artificial flowers and fruits, ornamental flower pots, gardening instruments, miniature drawing-room and boudoir fountains, for keeping bouquets fresh, and even some singing birds and gold fish. The show of green and hot-house plants was very inferior to ours, but there was great beauty and variety among the common flowers, such as Asters, Dahlias, &c. Among yellow Picotees, we have nothing equal to show in England. The grounds of several were brighter and deeper colored than ours, with much more variety in the color and marking of the edgings. Indeed, if a little more regularity of shape could be obtained, some of them would be very striking flowers. Why cannot we have in England, as they have now (Oct. 2) at Paris, abundance of Strawberries and Artichokes in all the markets? What struck me most was the great profusion of fine ripe Pears exhibited. While we can only obtain two or three good kinds at this season, there are at least eight or ten at Paris. L. H. *Ipswich.—Ib.*

Expeditious Grape Growing.—Seeing, by the report of the last meeting of the Horticultural Society, that my brother has succeeded in fruiting and ripening wood and fruit of the Black Hamburgh Grape from eyes struck in February last, I beg to state that I have got good bunches and well-swelled berries of Muscat of Alexandria, on vines struck from eyes in March last. The vines were not stopped at 15 inches high, as his were, but at eight feet, consequently the fruit is produced on the laterals. I would particularly recommend those about planting vineries, if they have the convenience, to strike their own plants in February or March, and plant them out in May or June. Some which I have treated in this way here in our new vineries, surpass two-year old plants planted in April. R. Elphinstone. *Ib.*

* There is, however, one fact which would almost lead one to suppose that the ova are impregnated 12 months before emission. It is this,—the male par (salmon fry,) are at this season full of milt, and almost ready for emission; whilst in the females, the ova are so small, that they require a microscope to see them individually, and the whole ovary is merely like a thread: either the milt of the male is not required to impregnate the roe of the female, or the roe is impregnated long before emission, for the roe of the female par evidently requires many months to bring it to maturity; but my opinion is, if a female salmon were to ascend a river without being accompanied by, or meeting with a male, that the roe would be impregnated by the *male par*, which always swarms about the salmon spawning beds; and the experiments of the Duke of Buccleuch's game-keeper (Shaw,) tend to prove that this is the fact—the same excess of males may be desirable that exists in a bee-hive, where there are, at least, a thousand males for one female.

Domestic Notices.

DESIGN FOR A DISTRICT SCHOOL-HOUSE.—We present our readers, in the FRONTISPIECE for this month, a design for a District School-house. It has at least the merit of simplicity in the plan, and as it is a paralellogram, of economy in construction. An entrance hall, or lobby, opens into a large school room for boys, upon one side, and one for girls on the other. Between these two rooms is a recitation room, which may contain a book case for the school library.

The exterior is bold and picturesque—the style a modification of the Swiss—and well adapted to many sites in our varied rural scenery. The widely over-hanging eaves afford a species of veranda shelter round the whole building.

This style is exceedingly well adapted for a *wooden* building, and its details are so simple that any country carpenter of intelligence could construct such a school-house without any further working drawings.

As we look upon the rural-church and the district school-house, as contributing more essentially to the architectural education of the country at large, than any private buildings, we hope, by presenting from time to time, various good models, to assist in banishing the present deformities, which pass by these names, from the face of the rural districts.

UNIVERSITY OF ALBANY.—We have great pleasure in calling the attention of our readers to the prospectus of the *course of lectures on Scientific and Practical Agriculture*, by Professor NORTON, which is to commence under the care of the University of Albany, on the second Tuesday in January. The lectures for the course are fixed at the low price of $10, and there are few farmer's sons, belonging to the *thinking* class, who would not reap great benefit from attending these lectures. In the absence of any state institution for Agricultural Education, the new University wisely takes the initiatory steps, by inviting Prof. NORTON—one of our soundest men of science in this department, to commence with a practical course of lectures in which the application of chemistry to the culture of the soil, will be especially considered.

GREEN-HOUSES IN WINTER—Dear Sir: Very few persons appear to know the value of the *sponge* in a green-house. I mean for the purpose of washing the leaves of all those plants with leaves broad enough to admit of it. I took the hint some five years ago from a neighbor, the most successful plant grower I ever had the good fortune to know. His plants were always so especially fresh and healthy, that I was for a long time puzzled to understand his secret, and he always declared he had no secret. But early one morning I caught him with a pail of clean water, slightly warm, by his side, sponging off the leaves of all his choice plants. I said to myself, "I have it." I did more; I went home and practiced it. My plants soon showed by their new aspect, that I was not wrong in believing it the real secret of my neighbor's success. They began to look brighter, healthier, and grow and bloom better than my utmost care had ever been able to make them do before. And now, strangers always ask the same question when they see my plants, that I used to ask my neighbor. My answer is, "use the sponge." The pores of the leaf get filled with fine dust—and the plant chokes. Syringing does not wholly remove it; the sponge does. Yours, AN AMATEUR. *New-York, Dec.* 16, 1851.

NOTES ON PEARS, &c.—Dear Sir: I send you for publication a few notes on Pears, Plums, Horsechestnuts, &c. Having fruited a large number of pears the present season we naturally had a desire to test their merits, and in order to do so rightly, we took the Seckel, and Virgalieu, which are said to be the standards for quality, as the criterion by which they should stand or fall. Those of merit which were in season with the Seckel and Virgalieu [White Doyenne,] are as follows:

Beurre Moirct, St. Michael, Archangel, Bonne des Zees, Ananas and Doyenne Gaubault.

We grew a number of Seckels and Virgalieus on our own grounds on standard trees, and the

new pears above on dwarfs. I will not enter into a description of each, but will merely say, that my partners, Messrs. Thorp. Smith, Hanchett, and others present, united with me, in the one opinion—namely: That they were all superior in flavor, &c., to either the Seckel or Virgalieu. Their size is fair and they are handsome pears. We have recommended these to all amateurs and friends, and have disseminated them largely. Our dwarf pear trees are very fine and vigorous, four years old and generally covered with blossom buds; their height from five to seven feet. Another pear ripening before any of the preceding, (about 1st of Sept.,) is the Beurre Gaubault. This proved to be this season, (with us,) a sweet, juicy and luscious pear, and well worthy a place in any collection, no matter how small. The Ananas will please those who are fond of the peculiar musky flavor of the Seckel.

In the June number of your Journal, I spoke of the Montgomery plum, and said that Mr. Carpenter from whom I received it, called it the Montgomery *Prune*. He also called the other plum the *Groundacre*, and I gave each as *his* terms. He has sent out these two fruits over a large portion of Ohio, and particularly in Fairfield Co.,—under the above names. Thus you will perceive that I have not dubbed it "*Prune*" but gave Mr. C. as the author. In relation to the "*Gundaker*," I believe I have the credit of first noticing it in your journal, and if that notice has been productive of no other good, it has at least brought out its true name, which I am very happy to learn, as I hold in no little esteem the faculty some people possess of *dubbing* fruits with new names, as much as your correspondent from Cincinnati or any other person.

In the October and November numbers I discover that you have an article on the Scarlet and Double flowering Horsechesnuts. I am happy to inform you that we have each, and have sold considerable of them. The scarlet, flowered with us the present season. Our trees are from six to eight feet high and stocky. Yours, &c., A. Fahnestock. *Syracuse, N. Y., Nov.* 7, 1851.

Protecting Grapevines.—A. J. Downing, Esq.—Last fall I laid down my grapes in my vinery on the ground, pinning them down and covering them with loose straw. During the winter the field mice got in and injured them, eating the bark from some of them for several feet, and otherwise injuring some of the finest of them.

Will you inform me what measures to take this winter, to prevent a similar occurrence, and how shall I lay them down and protect them. Yours very truly, S. K. Williams. *Newark, Wayne Co., N. Y., Nov.* 11, 1851.

If you fear the attacks of mice, lay your vines on the ground, and cover them with tan-bark. Ed.

Botanical Names.—Mr. Downing—Dear Sir: Will you be kind enough to answer through the Horticulturist, how such words as the following are pronounced. Smithii, Fortunii, Dillwynii, Scottii, &c.; and what is the difference between the above names, and those that end with one *i*, in pronunciation. H. H. Williams. *Cincinnati, Oct.* 27, 1851.

Ans.—A single *i*, final, is pronounced as Stricta venti, (pronounced *vent-eye;*) but when it ends a syllable not final, it has the sound of *e*,—as Mimulus Smithii, (pronounced *Smith-e-eye;*) Daphne Fortunii, (pronounced *Fortune-eye,*) &c.

Agricultural Education.—Dear Sir: The literary character of the principal editor of the Evening Post, gives importance to whatever he may write upon education, its means and ends. I enclose an article from his paper of to day, in reply to some other article recommending the establishment by the state, of *agricultural* schools, (only these) in imitation of Prussia. This reply, unnecessarily dragging-in the method of teaching, and political lessons taught, is just as applicable to all our schools. As well say have no common schools, no free academies, no colleges, because Prussia in her schools, academies, and colleges, teaches her children to be quiet subjects of an absolute government. It is a feint to conceal the true issue—to cover it with a prejudice—as if our farmers must be denied suitable means of instruction, because forsooth, Prussia teaches her farmers political submission with agriculture. To keep freedom's end equal then, we should provide equal means of instruction, and with the agricultural science, teach the doctrines of self and free governments. If I have read correctly of the course of instruction in the higher agricultural schools of

Prussia, it teaches nothing that a lover of the largest liberty need fear—no more dangerous absolutelsm than that of absolute obedience to the laws of physical science. (If I am in error you will know it.)

But it is to the latter part of his article I would ask your attention and rebuke: "*If agricultural schools are wanted in this state,*" &c. This is either a compliment to the existing state of agricultural knowledge, or an insult to the farmer. Really, it says to the farmer, that his occupation is so low that it needs not education, as provided to elevate and improve other professions. We know the editor values education highly; it is only the farmer—the clown in the country—that needs none, or if he discovers that he could work his farm to better advantage, with some other than mere intuitive knowledge, he must provide it for himself. Oh, I wish the farmers of New-York would make themselves heard this winter, not in the begging terms of a few, "pestering the next legislature," but in their strength, demanding to be placed in a position of equal privileges in the means of instruction, with the schools of Law, Physic and Divinity. It was to ask *your* rebuke to the tone and spirit of this article—the same that has damped every effort hitherto—that I enclose it. Your good efforts in behalf of agricultural education, are telling surely, though slowly, and gathering strength.

I am about leaving this city for Apalachicola, where I shall be pleased to obtain and send for you or your foreign friends, or others, any indigenous plants, seeds, &c., that you may wish, and that may be obtainable. Very respectfully, B. F. N. *New-York, 8th Nov.* '51.

We thank our intelligent correspondent for his timely notice of the leader in the Evening Post—which we reprint for the benefit of our readers.

THE EXAMPLE OF PRUSSIA.—In one of the morning journals, we perceive that the example of Prussia is adduced as one which we ought to follow in providing public instruction in agriculture. Prussia has, it is said, five agricultural colleges, besides ten schools of a more elementary character. She has seven schools to teach the cultivation of flax, two for showing how meadow-lands should be managed, one for instructing boys in the care of sheep, and forty-five model farms. We are asked to make Prussia our pattern in this matter, and the next legislature of the State of New-York is to be pestered with plans for raising money to endow agricultural colleges.

In Prussia everything is done by the government. The government founds and regulates the universities as well as the common schools; the government provides for religious instruction, for the building of churches and the appointment and sustenance of the clergy. It does all this without asking the leave of the people; not for the reason that the people would not provide as well by voluntary arrangements for their own spiritual and literary instruction, but partly because it desires to have all the institutions of education, of every sort, in its own hands, in order that the pupils may be trained up in such a manner as to make quiet subjects of an absolute government; and, in the next place its policy is to keep the people from engaging in public enterprizes of any kind. For all undertakings which bear the least resemblance to political transactions, for every institution, of any kind, which has any influence on public opinion, the people are taught to look to the government. The government teaches; the people learn and obey—public business is made to the mass a mystery, with the transaction of which they are not to intermeddle, nor presume to discuss.

This is the sort of government whose acts are held up to the State of New-York as an example. We are to go on, if this class of politicians are allowed to manage our affairs, accumulating all manner of cares upon the government till the government agency has everywhere supplanted individual enterprise and activity, as it has in Prussia.

If agricultural schools are wanted in this state, if there is any better institution for teaching how to take care of sheep, and manage meadow lands, than the farm of one of our intelligent yeomen, there is none, the establishment of which by voluntary enterprise, is so easy. Any man who understands practical agriculture, with such a knowledge of the auxiliary sciences as are necessary for the present improved modes of cultivation, might establish a school, in which the pupils would pay for their instruction by certain stated service, which of themselves would advance their progress in the arts of tillage and husbandry. Agricultural schools would, in this way, be the most economical of all. and the scholar would be trained up, without expense, to the highest degree of practical expertness, accompanied with a competent degree of theoretical knowledge.

In this manner model farms might be established in every county. If there is a real demand for agricultural instruction in a formal shape, how does it happen that we have no institutions of this kind already established? If the demand for them was urgent and the people impatient, institutions on the frugal basis we have mentioned, would be founded all over the country.

The only conclusion to which we can arrive is, that there is as yet no call among the agri-

cultural population for the schools which the politicians who hold that the government is to do everything, wish to give them. When such a call is made, there will be hundreds of enterprising individuals prepared to offer agricultural schools on the voluntary system.

We are somewhat surprised to see the common-place view of agricultural education taken by the editors of the Post. We commend to their attention the Report of the Massachusetts Agricultural School Commissioners of last January.

A perusal of Professor HITCHCOCK's very able report on the various Agricultural Schools of Europe, inspected by him personally, will, we think, change their views. Prof. H. states, that the history of the Agricultural Schools of Europe teaches conclusively, that Agricultural Schools usually fail, if they do not receive efficient aid from the government. Also, that when the government takes *exclusive* control of the schools, (as in Prussia,) the people usually take little interest in them. And lastly, he tells us that "*those agricultaral institutions succeed best which are started and sustained by the mutual efforts and contributions of individuals, or societies, and of the government.*"

The plain reason why some government assistance is needed is, that one of the principal objects is to try experiments—in order to ascertain the utility or worthlessness of supposed discoveries and improvements. Now a private school may be able to carry on a good system of farming—but a private school will always do what is most for the private interest of its principal to do—which is to raise only the most profitable crops—and not waste money in experiments. There are many branches of knowledge that would be highly useful for a young farmer living in a wheat district, to learn, that a private farm-school in a grazing district would not find it to its interest to teach; and there would be many branches of knowledge that the young farmer should acquire, which the limited means (as to teachers, apparatus, lectures, &c.) of the private school, could not compass—and in all these points the government would properly come in to the aid of the school. On the other hand, the young agricultural pupil should not be wholly supported and educated by the state—but should be obliged to pay something, either in money or labor, or both—in order that he may feel that he has a direct interest in the maintenance of the institution.

It is, undoubtedly, but too true, that the mass of the farmers feel but little interest in agricultural education. But so it is with the masses in every calling at first. The few more intelligent, feel and see the evils of ignorance and the value and power of knowledge, and it is the few who always organize any such institutions. The common school system, which everybody recognizes as *the* great institution of this country, was not called for by the mass of the people—it was urged upon them with difficulty by a few of the more enlightened minds of the country. Its value once demonstrated, the people look with horror upon the mental darkness of an uneducated nation. So, if the value of agricultural, mechanical, and scientific schools could be once fairly demonstrated to the masses, they would at once be adopted, universally, as right sources of power and influence and wealth—in the same way as the printing press and the post office are so adopted. There can be no more real question about the value of special education to the farmer or the mechanic, in a republic, than there is of the value to these men, of the thinking faculty itself. If there is anything in agriculture or mechanics that makes any demand upon the thinking faculties of man, then those thinking faculties should be recognised and educated in the best manner for their special function. If there is not, why then let the brutes take the sole charge of the farms and workshops—it is idle for intelligent human beings to waste their time and talents there. The truth lies in a nutshell. Either farming is an intelligent occupation and demands education, or it is not, and demands only brute force. Take which ever form of the dilemma you choose—farmers, editors, legislators!

ASHES VS. CURCULIO.—Dear Sir: Having read much in your valuable and ever welcome journal relative to the curculio, I thought I would give you a statement which I heard made by a person who has grown the plum with success several years, relative to his treatment of the tree to prevent the ravages of the "turk." It was this: when the tree is full in the blossom, and early in the morning when the dew is on, to throw common wood ashes all through the

branches and over the tree. One application to each tree was sufficient, and had entirely freed his trees from the Curculio. I give this to you for what it is worth, and you can make such use of it as you choose. Yours, J. HACKETT.

THE WILD ORANGE OR CAROLINA LAUREL.—Dear Sir: I send you a parcel of seed of a beautiful evergreen, known among us as the wild or mock Orange. I infer that it is a stranger to you, from having never seen it noticed in your journal. Perhaps, however, you may know it by some other name—if so, you will identify it by the sprig of leaves, and by the fruit, a small glossy black drupe, which I enclose.

At the south we have many noble evergreens, but not one which will surpass it either for elegance or form, or for denseness or beauty of foliage. It is a universal favorite, and, though from the abundance of prussic acid which is found in all parts of the tree, it is supposed to be poisonous, it is found in every garden. I have never heard of a serious accident from it.

It has this peculiarity that it bears the shears well. I have seen it trained from the ground in the proportions of the pyramidal cypress: and again kept as a border-edging, though when left to itself, it will attain a height of forty or fifty feet, with a trunk of from nine to eighteen inches in thickness. As a screen, too, it is at once handsome and impervious to the sight. I believe it would withstand your vigorous winter climate well, for here it thaws through a thick coating of ice, with as little apparent damage, as any deciduous tree of them all.

You will observe that they are enclosed in an oil-silk bag, which will suggest to you the propriety of planting them immediately. First, however, soak them for about twenty four hours in water, as this is always done by those who succeed with it best. I have stripped off the pincaps, a precaution which makes them generally a sure crop.

Hoping that you will excuse the liberty I have taken, and that the seed may reach you safely, I am, very truly, &c. O. *South Carolina, Dec.* 5, 1851.

Our correspondent will receive our thanks for the acceptable present. The evergreen is the *Cerasus Caroliniensis*—nearly related to those beautiful evergreens, the English laurel and the Portugal laurel—which are the ornament of almost every European garden. It should be called the Carolina laurel—as it has no affinity with the orange. We regret to say that it will not stand the winters here, as we have proved by trial. We think it will be hardy at Baltimore, and we have sent the seeds to Washington to be planted there, where this tree will be very ornamental. ED.

THE VICTORIA REGIA IN THE U. STATES.—We copy the following interesting account of this superb water lily, and Mr. COPE's successful culture of it, from Dr. EMERSON's admirable address before the Delaware Horticultural Society.

The horticultural triumph, of which I have attempted to give you a short description, as it has been recently achieved in Europe, with the aid of the science, skill, and wealth there so abundant, has been promptly repeated on this side of the Atlantic by Mr. Caleb Cope, President of the Philadelphia Horticultural Society, with whose company we are favored on the present occasion. When it is considered that in Europe, the aid of princely munificence has been called into requisition in obtaining the first successful developments of the Victoria Regia at Chatsworth, Kew, and Zion House, the horticultural feat accomplished by our tasteful and spirited fellow-citizen, must be the more highly appreciated. The eclat of Mr. Cope's achievement is only equalled by the kindness he has displayed, not only towards his personal friends, but the public at large, to all of whom his superb conservatory has been freely opened. More than this, many Horticultural Exhibitions have, like the present, been supplied by him during the blooming period, with flowers and leaves of the Victoria Regia, which has greatly extended the gratification furnished by a sight so perfectly unique.

On the 21st of last March, Mr. Cope planted in seed-pans four seeds obtained from England, through the kindness of Sir Wm. J. Hooker. Three of these grew, and one of the plants was, on the 21st of May, transferred to a circular basin about twenty-five feet in diameter, enclosed in a glazed house erected expressly for the purpose. There it has been kept in water maintained at the tepid temperature of 76° to 85° Fahrenheit. The depth of water in the tank or basin is about two and a half feet, and the oozy soil at the bottom, into which the roots of the plant expands, is about the same depth. It is worthy of notice that the first leaves produced did not exhibit the turned-up edge, or salver-shape, which contributes such an uncommon appearance to to the plant, until about twenty-four had grown. Ever since that period the leaves have been salvered as quickly as they expanded. The development of a leaf, on first

raising to the surface of the water, presents a most curious sight, not easily described. Rolled into a body of a brownish color, and covered with thorny spines, it might readily be taken for some large species of sea-urchin. The under side of the leaves, as well as the long stems, by which the flowers and leaves seem anchored in the water, are thickly covered with thorns about three-quarters of an inch long. On the 21st of August, just five months from planting the seed, a flower was developed, and the success of the interesting enterprise thus fully crowned.

As yet Mr. Cope has brought forward only one of the three plants produced from the four seeds. But this has continued not only to keep his tank, large as it is, always covered by its immense leaves, some measuring six and a half feet in diameter—many of which have from time to time been removed and replaced by fresh ones—but also furnished two flowers a week since the first blooming. Some of these flowers have measured seventeen inches in diameter. The petals always open early in the evening, and partially close about midnight. During the daytime, therefore, the Victoria Regia is seldom seen in fullest splendor, unless when removed from the parent stem.

If the development of the leaves of the Victoria Regia present such a singular appearance, the successive movements or changes in the flower are not less extraordinary and far more beautiful.

The crimson bud, which for several days has been seen rising, at last reaches the surface and throws off its external investment in the evening, soon after which the flower petals suddenly unfold, the expanded blossom, like a mammoth magnolia, floating upon the surface of the water, decked in virgin white, and exhaling a powerful and peculiar fragrance which has been compared to the mingled odors of the pineapple and melon. On the morning of the second day another change is observed and the outer petals of the flower are found turned backward or reflexed, leaving a central portion of a conical shape surrounded by a range of petals, white on the outside but red within. A slight tint of pink is discernible through the interstices of of these petals, which increases as the day advances. In the evening, about five o'clock, the flower is seen to be again in active motion preparatory to another production. The white petals, which were reflexed in the early part of the day, now resume their original upright position, as if to escort their gay colored companions surrounding the central cone to the limpid surface below. After this the immaculate white of first bloom changes to gay and brilliant pink and rose colors. Finally, a third change ensues, marked by the spreading of the petals further backwards, so as to afford the enclosed fructifying organs liberty to expand. These are soon seen to rise, giving to the disk of the flower a peach-blossom hue, the stamens and pistils at the some time assuming a figure not unlike that of the old regal crown of England. On the third day the flower is nearly closed. All the petals seem suffused with a purplish pink; the coloring matter, which was originally only seen in the centre, having apparently penetrated the delicate tissues of the entire flower.

The leaves exhibited here do not belong to the plant which produced the magnificent flower before you, but were taken from a garden tank in which Mr. Cope has brought forward the lily under glass, without the assistance of stove-heat. It is true this lily has not yet bloomed, but the fine development of leaves gives reason to believe that, with the aid of a warmer sun than they have in England, the Victoria Regia may be brought to perfection in this country, even without artificial heat. In order to give it every advantage, it will still be necessary to start the plants in seed-pans placed in hot-beds, or heated conservatories.

In concluding this brief accounnt of the Victoria Regia, I may observe that to German and French scientific explorers of primeval forests, is due the honor of first discovery and description, whilst to British activity and perseverance we are indebted for the introduction of this great floral prize into England, from whence it has been brought to our own country. Mr. Cope has succeeded in his first experiment, in producing the Victoria Regia with larger leaves and flowers, than any yet reported as having been raised in Europe. In his conservatory floats the Queen of Flowers in all her beauty, attended by her natural but strange-looking subjects, the orchids, suspended around in groups, and mingling their fragrance with her own. In fact, the whole scene presented in the lily-house is unique and highly impressive, well calculated to awaken poetical conceptions, among which it is easy to imagine a shrine consecrated to an oriental goddess, or grotto dedicated to water-nymphs, and presided over by Ægle, the fairest of the Naiades.

RANDOM NOTES ON PEARS.—A few observations made during a short visit to some of the eastern gardens, may prove interesting to the fruit-growing readers of this journal.

BLIGHT.—A remarkable fact, and throwing some light (negatively,) on the pear blight, is the entire absence from this disease among the trees in the neighborhood of Boston. It seemed indeed strange to hear such men as the president and ex-president of the world-renowned Horticultural Society there, inquiring for the appearance and symptoms of the blight as of a disaster personally unknown to them, but so universally known and dreaded in Western New-York and in Ohio. Boston and Rochester are not dissimilar in temperature of climate, hence we cannot trace it satisfactorily or wholly to the weather. Nor is rapid growth a necessary cause, for more freely growing trees than the thousands on the grounds of M. P. WILDER, S. WALKER, or C. M. HOVEY, are nowhere to

be found. A part of Col. WILDER's grounds consist of reclaimed bog, with an ample addition of improving and fertilising materials; and the finest pear grounds belonging to President WALKER he stated had been very heavily dressed with yard manure, with additions of ashes and guano, and the whole repeatedly plowed, and repeatedly subsoiled, till mellow and rich in a high degree to a depth of about two feet. The growth of the trees fully corroborated his account. Limited observations at Philadelphia indicated a somewhat similar condition of the trees at that place.

PYRAMIDAL PEARS.—The finest collection, perhaps, in this country, are the 1500 pyramids of HOVEY & Co., at Cambridge, some of them 10 feet high. The pear crop proving this year mostly a failure, but few of them were loaded with fruit; but the beauty of their training, as presented in the long avenues of these trees, could scarcely be surpassed by CAPPE's celebrated trees of Paris. These were mostly, like CAPPE's, on pear roots. Equally handsome specimens were observed on some parts of Col. WILDER's grounds.

NEW PEARS.—Of the newer varieties which have been considerably proved, none appear to be more generally admired than the *Doyenne Boussouck*, for size, growth, productiveness and quality. We have never heard a word against its high character. The *Beurre Langelier* is regarded by HOVEY as the best early winter pear, and is highly esteemed by MANNING, WALKER, and others; while on the other hand, MANNING thinks the Lawrence is decidedly the best, so far as a partial trial will indicate. Col. WILDER finds the *Doyenne gris d'Hiver Nouveau* of good quality, and ripening later than Easter Beurre; the *Howell* large and fine; the *Triomphe de Jodigne*. "good;" *Nouveau Poiteau*, handsome and fine; and *Soldat Laboreur* a beautiful grower and a fine pear. *Van Mon's Leon le Clerc*, as elsewhere, cracks badly with him, and the *Dix* very badly. Some of the worst looking specimens of cracked pears observed anywhere, were on a tree of the Dix. Has this new and hardy American tree already reached old age? Or will it die of old age at Dorchester, at the same time it is flourishing in youth and vigor near Rochester? A puzzling fact in relation to cracking, occurred on the grounds of the writer,—a young Doyenne pear on *new ground*, while bearing its first crop, became dotted with black specks, precisely like those of leaf blight, on both leaves and fruit at the same time, and the fruit cracked and was worthless. This was some years ago, and has not been repeated. Not far distant, on very similar soil, stood another old Doyenne tree, bearing yearly six to twelve bushels of uniformly fair fruit. This fact is very adverse to the theory of *exhaustion of soil* by trees of long standing.

ROBERT MANNING has found only two of Knight's pears of much value, the *Eyewood* and *Moccas*. The *Monarch*, after a vast amount of pains to get it correct, proves after all, of no great value. *Manning's Elizabeth*, he regards as one of the finest early pears. The *Duchesse d' Orleans* promises to become very valuable. Of Gov. EWARDS' new sorts, the *Calhoun* proves the best, and the *Dallas* a good fruit; the others not so worthy of notice.

STANDARDS ON QUINCE.—Those sorts which grow freely and endure well on the Quince, as Louise Bonne of Jersey, Angouleme, Glout Morceau, &c., may be set out in orchards and trained standard height. Specimens thus treated, more than twenty years old, bearing usually several bushels a year, were observed in a fine condition in the gardens of S. WALKER and M. P. WILDER. The Langelier and Boussock promise to be good for this purpose.—J. J. T. in Cult.

AGRICULTURAL JOKES.—*Punch*, in the following, wants to put the new reaping machine to a novel use:

Mr. Punch presents his compliments to Mr. Hussey, and hearing that his reaping machine is the best for corn-cutting, will feel obliged by one being sent immediately, as he wishes to cut his own corns. Mr. Punch would not have troubled the celebrated American *Hussey*, but his own wife, *Judy*, is such a lazy hussey that she will not perform the operation required.

An enlightened agriculturist out West, thinks the best way to make farmers grow Madder, is TO POKE 'EM WITH SHARP STICKS!

PENNSYLVANIA HORT. SOCIETY—*Nov.* 18, 1851.—The President in the chair. A collection of plants in pots, by John Lambert's gardener, was interesting. This being the show night for Chrysanthemums, there were eight collections presented, in which were many of the choicest kinds; and were from Robert Buist's, James Dundas', George North's, John Lambert's, A. Parker's, and Caleb Cope's grounds; the collection from the latter consisted of those new and beautiful varieties called *Lilliputian*, which have been recently imported, and for the first time shown; they are decidedly the prettiest of this tribe of plants. From the same source was seen another of those exquisitely beautiful baskets of cut flowers, which for several meetings past have graced the tables containing the choicest flowers of the green-house, of which many were from air plants, but as at the last occasion, the crowning flower was the *Victoria Regia*, the 24th production of the plant; although of smaller proportions than those borne by the plant when in full vigor, still it was a perfect gem, and much admired. Among the fruits were seen beautiful specimens of pears,

some luscious in taste—they came from H. W. Cleveland, Burlington, Isaac P. Baxter, N. W. Roe, of Woodbury, A. M. Eastwick, J. P. Cushing, Mass.—the Dix, and a specimen of the pound variety weighing twenty-two ounces, from the state fair at Harrisburgh. Three tempting bunches of Black Hamburgh Grapes were displayed by H. W. S. Cleveland. Several dishes of Apples were exhibited, and were from David Miller, Jr., Lancaster co. The Fuller, Walder, Pittsburgh Pippin, Better than Good, and Herman's Favorite. James H. Watts of Rochester—the Northern Spy—C. Lee, Penn-Yan, the Wagoner; Mathew McKie, the Clyde Beauty. Of vegetables, Anthony Fuller, Jr., exhibited an extensive display; and Maurice Finn, gardener to Mr. Lambert, John Gallagher, gardener to Miss Gratz, and Thos. Meehan, gardener to A. M. Eastwick, very creditable displays.

The President in a few remarks, in acknowledgment to the society for the honor conferred upon him at the last meeting, by the award of the gold medal for his success in the cultivation of the Victoria Regia, announced that he had just received a very interesting letter from Sir Wm. J. Hooker, which was read, expressing his gratification at his success in cultivating the Victoria, stating the fact of his having sent seeds to Calcutta and the West Indies, where flourishing plants had been grown and seeded abundantly in the open waters. Mr. Cope remarked, that the plant which he had growing in his garden tank, had two flower buds when it was taken up recently.

A communication from A. H. Ernst, president of the Cincinnati Horticultural Society, was read, desiring that the great exhibitions of the prominent horticuitural societies should be held at such times as would give the members of each society an opportunity of visiting each other's display, and thus derive information mutually beneficial. The subject was referred to the appropriate committee.

December 16, 1851.—The extreme severity of the weather precluded an extensive display, yet a number of objects of interest were shown; of which were a collection of plants, *new*, and recently introduced, and presented by Robert R. Scott, consisting of *Drimys Winterii*, *Centropogon fastuosum*, *Illicium religiosum*, *Franciscea eximia*, *Veronica Andersonii* and *Hibiscus*, sp. The President's gardener exhibited a beautiful and neat table design, and a large and very handsome basket of the choicest flowers; in the latter were specimens of *Phalanopsis amabilis*, rare, and other new and valuable *Orchidaceæ*. Mr. Dundas' gardener brought in a very large and fine pyramidal bouquet of fruit. H. W. S. Cleveland exhibited three large bunches of Black Hamburgh Grapes. Isaac P. Baxter, dishes of Pears of the Passe Colmar and Vicar of Winkfield varieties. Of vegetables, there were seen very large specimens of potatoes and onions, grown in California, and shown by Wm. H. Evans. Very extensive tables of esculents in great variety, were presented by Anthony Felten, Jr., and Miss Gratz's gardener.

The committee for establishing premiums reported a schedule for the coming year, which was adopted by the Society. THO. P. JAMES, *Recording Secretary*.

Answers to Correspondents.

HALF HARDY PLANTS.—*W. P.*, (Auburn, N. Y.) Chinese Azaleas are almost hardy. Messrs. HOGG, of N. Y., keep them in common frames—a box of boards covered with glass—and the latter sheltered by a few mats in very severe weather. Most of the Fuchsias may be wintered in a pit without heat—especially if the pit is dry and sunk a couple of feet below the level of the ground. We doubt if the Araucaria or Chili Pine will prove hardy with you. If it does, it will only be on very dry, sandy soil. *Plumbago Larpentæ* is found hardy about New-York, in a dry soil and a shaded situation. It bloomed abundantly and was very showy from August to November.

GREEN HOUSES.—*A Lady*, (Norwich.) From the account you give, we have no doubt your plants suffer from the dry hot-air caused by the flues being heated to a high temperature to keep out frost. You should keep a large tin vessel filled with water on the hottest part of the flue and if you can contrive to introduce a stream of fresh air from outside and let it pass over a portion of the flues, so as to come into the house warm, you will find the health of the plants amazingly improved by it. A small brick chamber formed around the furnace, con-

nected with the open air by a pipe, and with the air of the green house by another pipe, would answer the purpose;—or a tin drum might be formed over the hottest part of the flue into which the outer air may be admitted and passed into the house, when warm. Many plants refuse to expand the flowers properly in a green house when there is plenty of light and heat, solely from the want of fresh air.

Gooseberries.—*A constant reader*, (Trenton, N. J.) This fruit does not succeed here so well as in England, because our climate is too hot and dry for it. In Maine and Canada they bear very finely. To succeed in your garden, you must choose a border on the north side of a paling fence—trench it two feet deep, laying in the bottom spit of the trench a heavy dressing of fresh stable manure. In this plant the best English gooseberries, of such sorts as Crown Bob Gascoigne, White-Smith, Royal Sovereign, &c. The bushes should be about three feet apart. When planted keep the bushes trimmed to a single stem, and thin out the shoots, in March, pretty freely. The next, and most important point, is to keep the whole border *mulched*, 6 *inches deep*, to preserve the coolness and moisture of the earth—in order to prevent mildew. The best substance for mulching gooseberries is salt hay; the next best tanbark. It is better to have a dozen plants grown in this way, with large clear fruit than a hundred, as we usually see them, covered with mildew.

Growing Mushrooms in Winter.—*J. B.* (Philadelphia.) Nothing is easier than to produce a crop of mushrooms under the stage or under the walk of a green-house, if the walk is one made partly open of wooden slats. All you want is mushroom *spawn*, [seed] which may be bought at any of the large seed stores, manure and warmth. The following directions by Glenny, are so much to the point on mushroom culture, that we cannot do better than reprint them. The theory of growing mushrooms may be reduced to a rule that is unerring in numerous ways. First; horse droppings, or short dung, with body enough to generate heat, will always produce a crop of mushrooms if spawn is inserted. Consequently, a mushroom bed may be made like a hot-bed, anywhere, so that it be kept dry. Second; horse droppings or short dung, in too small a quantity to generate heat of itself, will nevertheless, produce mushrooms when spawned, if the temperature of the house is kept up. Consequently, a large pot filled all but two inches with horse droppings, a lump of spawn put in, and two inches of mould at the top, will yield mushrooms in great plenty, if put in a stove, (or hot-house of high temperature). Shelves two feet wide, with a two-inch ledge in front, may be filled as full as possible, on a slope, with droppings or short dung by which means the wall of a shed or out-building capable of keeping the frost out, may be made to hold several tiers, one above the other, two feet distance being enough from one shelf to the other, the moulding and spawning being similar to all other beds; but the temperature ought to be steady, and no draught admitted. This mode of culture in a cellar is very desirable, light being not at all requisite to the production of the mushroom. The principal attention required is to have the dung of a good genial warmth at the time the spawn is inserted. After it has begun to work well, all that is necessary is to keep off frost, cold winds and draught. A covering of clean straw is of great service, and it must not be forgotten that moisture is necessary, though too much of it is mischievous. Mushroom houses have been erected on various plans; but as almost every kind of structure, from a cellar to an attic, from a stove to a shed, can be made available, we should never think of constructing a house on purpose. There is not a corner that may not be appropriated to the culture of this valuable esculent.

Hayes Farm—Devonshire—The Birthplace of Sir Walter Raleigh.

Hort: Feb. 1852